

DRAFT

LAND USE AND DEVELOPMENT PROCEDURAL PLAN FOR THE PINE NUT ALLOTMENTS (NV)

Bureau of Indian Affairs
Western Regional Office



September 2009

Prepared by



CASCADE DESIGN
PROFESSIONALS, INC.

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Land Use Development and Procedural Plan (“Plan”) for the Pine Nut Allotments in Western Nevada

Preface

This document contains a set of procedures, standards, and lease provisions that will apply to any type of new land use developed under a lease agreement between an allotment owner and a private developer.

The purpose of this Plan is twofold: first, it is intended to guide the BIA in its review of development proposals which require commercial leases; and, second, the Plan will protect the long-term financial interest of allotment owners through a leasing mechanism by which the land can be kept in trust.

The Plan does not preclude development on an allotment by an owner(s). Moreover, the Plan does not promote or encourage the development of any allotment as that decision rests solely with the owner(s).

Allotment owners will continue to enjoy the rights and privileges associated with the allotments. Owners have the right to build their own home or other facilities, or they can choose to leave it in a natural, undeveloped state. The Plan does not restrict the type of development on an allotment as would be the case in a local government’s land use plan and zoning regulations. This plan will only apply when a majority of the allotment owners choose to lease their land to a private developer.

The Plan also provides uniform and consistent procedures, and appropriate development standards. Through their use of the Plan, the BIA can effectively evaluate proposed development projects and structure commercial leases that benefit allotment owners.

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EXECUTIVE SUMMARY



EXECUTIVE SUMMARY

In May 2007, the Bureau of Indian Affairs, Western Regional Office, contracted with Cascade Design Professionals, Inc. to prepare a Land Use and Development Procedural Plan for the Pine Nut Allotments. The purpose of the plan is to guide BIA decision making in its review of commercial (residential, investment and recreational) development proposals made by individual Indian landowners and potential lessees. The Plan includes:

- A land use suitability analysis and identification of the “highest and best” use for allotments that have development potential
- Analysis of the impacts of development and identification of appropriate mitigative actions
- Development standards to ensure a minimum level of development quality as well as providing a measure of protection to adjacent allotment owners
- Recommendation of lease provisions that would provide the best economic return to landowners

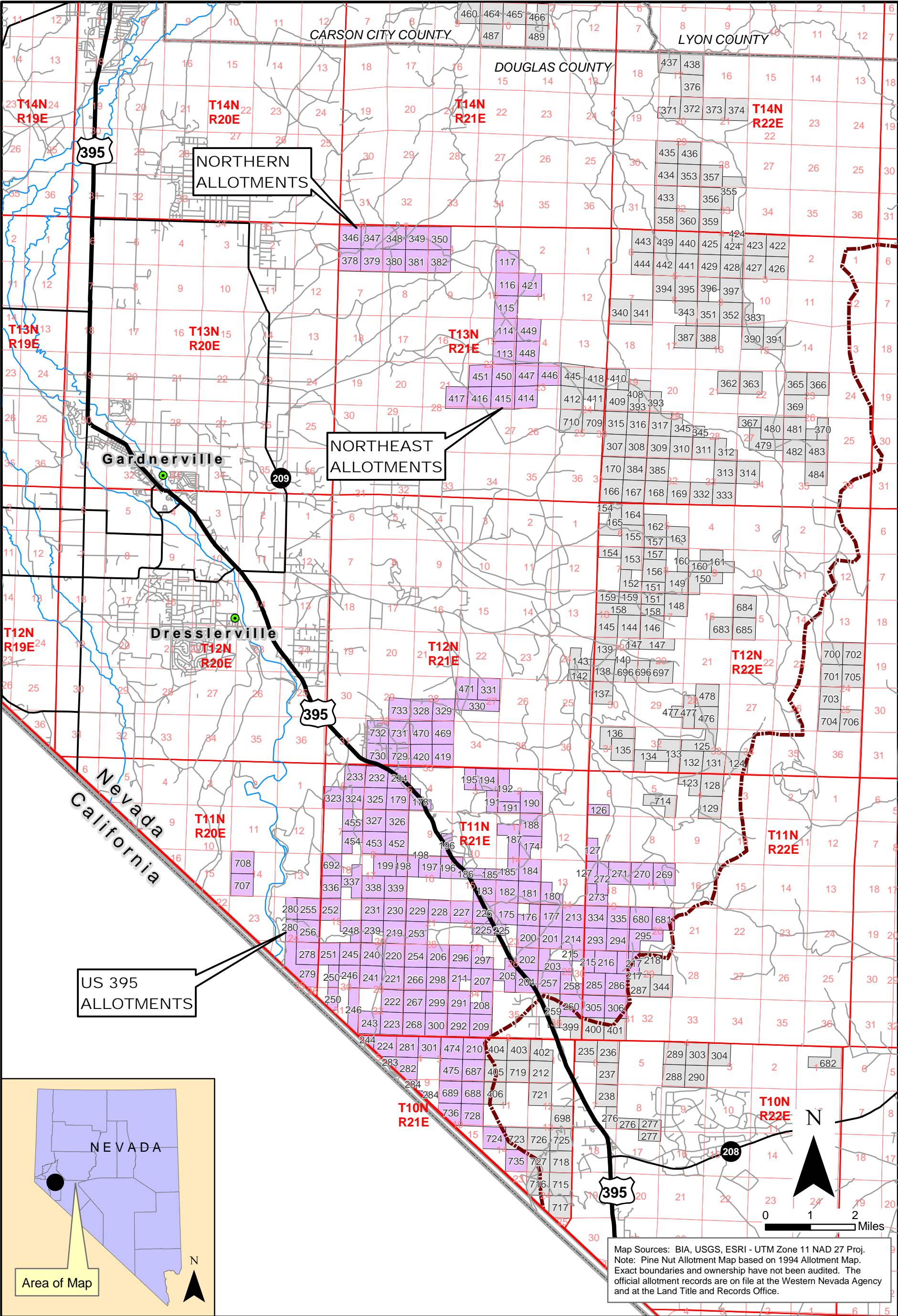
This Land Use and Development Procedural Plan for the Pine Nut Allotments (Procedural Plan or Plan) is not a traditional land use plan that designates specific uses for each allotment; but rather, it is composed of a set of procedures, standards, and lease provisions that will address any type of land use that would be developed under a lease agreement with a private developer. **The intent of the Plan is to keep the land in trust, so the land owners can realize an income stream over the long term.**

The Plan does not (1) preclude any individual development on an allotment by an allotment owner or owners; nor (2) is there any intent to promote the development of any allotment. Allotment owners will continue to have the right to build their own home or other facilities on their allotment, or they can choose to leave it in its natural, undeveloped state. **This plan only comes into effect when allotment owners choose to lease their land to a private developer.** The Plan is also intended to provide a uniform process and appropriate development standards in order for the BIA to effectively evaluate proposed development projects as well as in structuring a commercial lease to the benefit of the property owners.

STUDY AREA

Of approximately 300 allotments currently held in trust, the BIA identified 176 allotments that might potentially have some development potential for inclusion in the planning effort. As shown in Figure E-1, the allotments were divided into three clusters for purposes of planning:

- North Allotments – 10 contiguous allotments north-northeast of the Minden/Gardnerville urban area and east of the Minden-Tahoe Airport



- Northeast Allotments – 16 allotments east and slightly to the south of the North Allotments
- US 395 Allotments – 150 allotments southeast of Minden/Gardnerville urban area along the US 395 corridor

The North and Northeast Allotments are characterized by flat to rolling terrain, with elevations less than 5800 feet. The US 395 Allotments are in the Pine Nut Mountain Range and many of the allotments are in areas of steep slopes, with elevations exceeding 6500 feet in some areas, and have no access or are far from any existing road. The vast majority of the Pine Nut Allotments are undeveloped. What development does exist is scattered along the US 395 corridor.

PLAN DEVELOPMENT

Land Use Suitability

Initial planning efforts centered on determining, based on physical characteristics, which of the approximately 176 Pine Nut Allotments included in this study would be suitable for major development and how they would rank from the standpoint of developers interested in entering into long-term lease agreements with allotment owners.

Criteria defined as critical to development suitability were:

- Topography
- Access
- Public Services
- Soils Suitability for Development
- Ownership

Of these criteria, topography and access directly affect the cost of development and its attractiveness to developers and were determined to be critical to the development potential of allotments. Consequently, it was determined that some of the allotments were not suitable for development because of their elevation and/or slope or lack of access and were removed from further development analysis; they will be designated for cultural, recreational, or natural resource uses. Results of the evaluation of the remaining allotments indicated:

- All of the 10 North Allotments are totally, or in part, developable.
- All of the 16 Northeast Allotments are totally developable.
- In the US 395 Allotments area, 39 allotments are suitable for development, 15 have marginal suitability, and 96 are not suitable. The most attractive allotments for development lie adjacent to US 395 where access is direct and there is fairly level terrain. A few other allotments are also attractive on the north and northwest boundary of the allotments, due to favorable slopes and existing access.

A detailed description of the Land Suitability Analysis is included in Appendix C.

Highest and Best Use Designation

Based on the land use suitability analysis as well as a development trend analysis, the following highest and best land use designations were assigned.

- Northern Allotments - Larger-scale, planned development such as residential subdivisions or self-contained communities such as a retirement center or resort
- Northeast Allotments - Larger-scale, planned development such as residential subdivisions or self-contained communities such as a retirement center or resort
- US 395 Allotments - Single-family residential development or small subdivisions on the flatter parcels in the area between the Pine Nut Mountains and Carson Valley; horse ranches or other “lifestyle” homesites in the Topaz Lake—Holbrook Junction Area, at the southern end of the Pine Nut Mountains; single-family residential development in the flatter allotment areas in the central Hwy 395 Allotments, close to the highway for families that want relative isolation and a rural lifestyle; essentially no development potential beyond the flatter areas for allotments east and west of the highway (retain for cultural, recreational, or resource uses).

A detailed description of the Development Trend Analysis and Use Designations is provided in Appendix D.

Impact Analysis

As part of the planning effort, the impact of development on the allotments and surrounding environment was conducted and measures to mitigate those impacts were identified. The impact analysis was based on the results of the Land Use Suitability Analysis and focused on a maximum development scenario from the Highest and Best Use Designations.

Unlike most impact analyses, there is no specific proposed project to evaluate, making a detailed impact analysis impossible. Because of this unique situation, the impact analysis was limited to addressing general impacts based on a residential development scenario that would potentially produce the most severe impacts.

Overall, based on that development scenario, the major cumulative effect would be the change in character of the landscape in specific areas from undeveloped, unspoiled natural areas to rural and suburban densities of residential uses. Clearly the most significant changes would be the conversion of land use and the increase in traffic that it will generate, particularly in the North and Northeast Allotment areas where there is no development other than a few earth roads.

A table summarizing environmental impacts is presented in Chapter 5 of this Plan, and the complete impact analysis is contained in Appendix F.

PLAN SUMMARY

Development Process

Because the Pine Nut Allotments are not subject to the jurisdiction of any city, county, or state government and have no comprehensive plan, public policies or development process in place to control or direct land use, developing a traditional land use plan is not a workable option. Therefore, the plan developed for the Pine Nut Allotments is a *procedural* plan that consists of a development process with accompanying development standards that ensure developments meet appropriate standards for public health, safety, and general welfare, as well as protect the value of the land for the allotment owners over the long term and provide neighboring allotment owners a degree of protection against nuisance uses and any negative impacts from development. Development proposals will be evaluated through a uniform process and on their own merits.

The process and standards spelled out by this Procedural Plan are similar to normal land development requirements at a city or county level, but also include some post-development requirements that are related to the BIA trust responsibility and are important to the allotment owners and to the sub-lessees. The Procedural Plan involves a three stage process:

- Pre-development – site planning, environmental analysis, establishing agreements for utilities and public services, project approval, and if approved, execution of a Master Lease
- Development – construction and ongoing inspections ending with the issuance of a Certificate of Occupancy
- Post-development – ongoing monitoring, reporting, and enforcement to ensure that the terms and conditions of the Master Lease and the provisions of the development standards are maintained in order to protect the value of the land for the allotment owners

A detailed description of this development process is provided in Chapter 4 of this Procedural Plan.

Development Standards

Based on the type and scale of recommended development for the Pine Nut Allotments, codified development standards and design criteria for the development of leased property were developed to aid in the submittal of plans for review and approval. The Development Standards are intended to be used together with the applicable Douglas County Engineering Design Criteria and Improvements Standards Code (DCIS), the provisions of the International Building Code (IBC), and the International Fire Code as required, outlining which uses are allowed, conditional, temporary or prohibited on leased lands within the Pine Nut Allotments.

All new developments and modifications of existing developments will require one of two types of review processes:

- Development Review Type I – less complex developments and land uses that do not have significant design review issues; no public hearing required
- Development Review Type II (Conditional Use Permit) – for all development uses except those specifically listed under Type I or deemed to be prohibited uses; requires public notification of adjacent property owners and may include a third party design professional

Development Standards, Design Criteria, and Type I and Type II applications procedures and requirements are described in more detail in Chapter 6 and included in Appendix G of this Plan.

Lease Recommendations

Under a land lease, the ground on which a proposed structure is to be built is leased to a builder/developer (Lessee) instead of being sold, meaning that the land and the structure(s) are owned independently. Two key assumptions underlie the lease recommendations for the Pine Nut Allotments:

- The Pine Nut Allotments will remain in Trust status, and there will be no provisions for granting fee title to the land to any parties
- The leases are expected to return fair market value to the allotment owners over the periods of those leases

Some issues are of particular importance for lease provisions specific to the Pine Nut Allotments:

- **Ownership** – Many of the Pine Nut Allotments are held in multiple ownerships. For those allotments not held in single ownership, there need to be an express provision designating who can sign the lease on behalf of the other owners
- **Term of Agreement** – Recognizing that the leases need to protect the allotment holders but still provide incentives for developers, the length of term of the leases has to be long enough to enable conventional financing of projects, perhaps 99 years or with escalating terms
- **Lease Renewal** – The Lessor may renew a lease as it approaches termination, usually at renegotiated amounts of rent; however, that is not automatic and can make it difficult to lease land on which other parties are expected to make capital improvements.
- **Lease Revenues** – Allotment lands should be valued to ensure that the lease revenues provide market rates of return over the full period of those leases, i.e. obtain a qualified appraisal to set the current market value, then apply an escalator that assures the lease revenues at least match rates of inflation over the term of the lease.
- **Uses of the Property** – Leases often allow for flexibility in the development of properties to adjust for changing markets and other circumstances that are unforeseen when the lease is negotiated. However, the BIA should require having a general plan for development provided by the Lessee prior to the execution of the lease.
- **Time and Expenditure for Improvements** – Language needs to be included in all leases delineating timed benchmarks that must be met to ensure continuing progress toward the final full development. Equally important is a default provision that describes the rights of the Lessor in case the Lessee fails to meet the requirements of the lease.
- **Water Use and Facilities** – Water is an important issue in the Pine Nut Mountains and there needs to be flexible but clear language that describes how water will be provided to each allotment, who is responsible for providing it, what uses are allowed for that water, what limitations are imposed, and how the water use will be monitored. Leases and subleases also should include a disclaimer that groundwater may not be available over the life of the development.

Overall, it is important for any lease to have specific provisions for performance and remedies for defaults, to obtain the Lessor's approval for any changes in a lease through subletting, assignments, transfers of property, or other actions, and for the Lessor to perform due diligence into the qualifications, experience, track record and financial capabilities of the Lessee before the lease agreement is signed.

A detailed description of lease recommendations is provided in Chapter 6 and Appendix H of this Plan.



1 INTRODUCTION

PURPOSE AND NEED FOR THE PROJECT

The U.S. Government holds approximately 300 allotments in Douglas County, Nevada, within the Carson Watershed, in trust for hundreds of individual Indian landowners. The allotments vary in size from 40-160 acres. These allotments are collectively known as the Pine Nut Allotments. As trustee, the Bureau of Indian Affairs (BIA) is charged with certain management responsibilities, but with long-term land use decisions generally being left to the Indian landowners themselves. BIA's role mainly involves the review and approval of those land use decisions.

A growth surge in early 2000 in Douglas County created a high demand for housing and related commercial development. Most of the suitable non-trust land in Douglas County has already been developed, and Indian landowners are being approached with residential and other long-term commercial lease proposals. Leases of allotted land are typically entered into between the Indian landowner(s) and the lessee, subject to BIA approval. The approval standards found in applicable statutes and regulations are minimal and provide little guidance for BIA in its review of these proposals. Moreover, the absence of either tribal or county land use jurisdiction creates a unique need for very detailed contractual building and operating standards and procedures to be administered or enforced by BIA.

To address these concerns, the Bureau of Indian Affairs, Western Regional Office, contracted with Cascade Design Professionals, Inc. in May 2007 to prepare a Land Use and Development Plan for the Pine Nut Allotments. The purpose of the plan is to guide BIA decision making in its review of commercial (residential, investment and recreational) development proposals made by individual Indian landowners and potential lessees. In so doing, those landowners who wish to develop should be able to negotiate leases that are focused on a process that allows land to remain in Indian ownership, and not only provide the maximum economic benefit, but also ensure that the environment and the rights of surrounding landowners are adequately protected.

STUDY AREA

Of the total number of Pine Nut Allotments, the BIA identified 176 allotments for inclusion in this planning effort. These allotments were selected as being potentially developable. The remaining allotments were located in very steep areas limiting their development potential. The study area is shown in Figure 1-1.

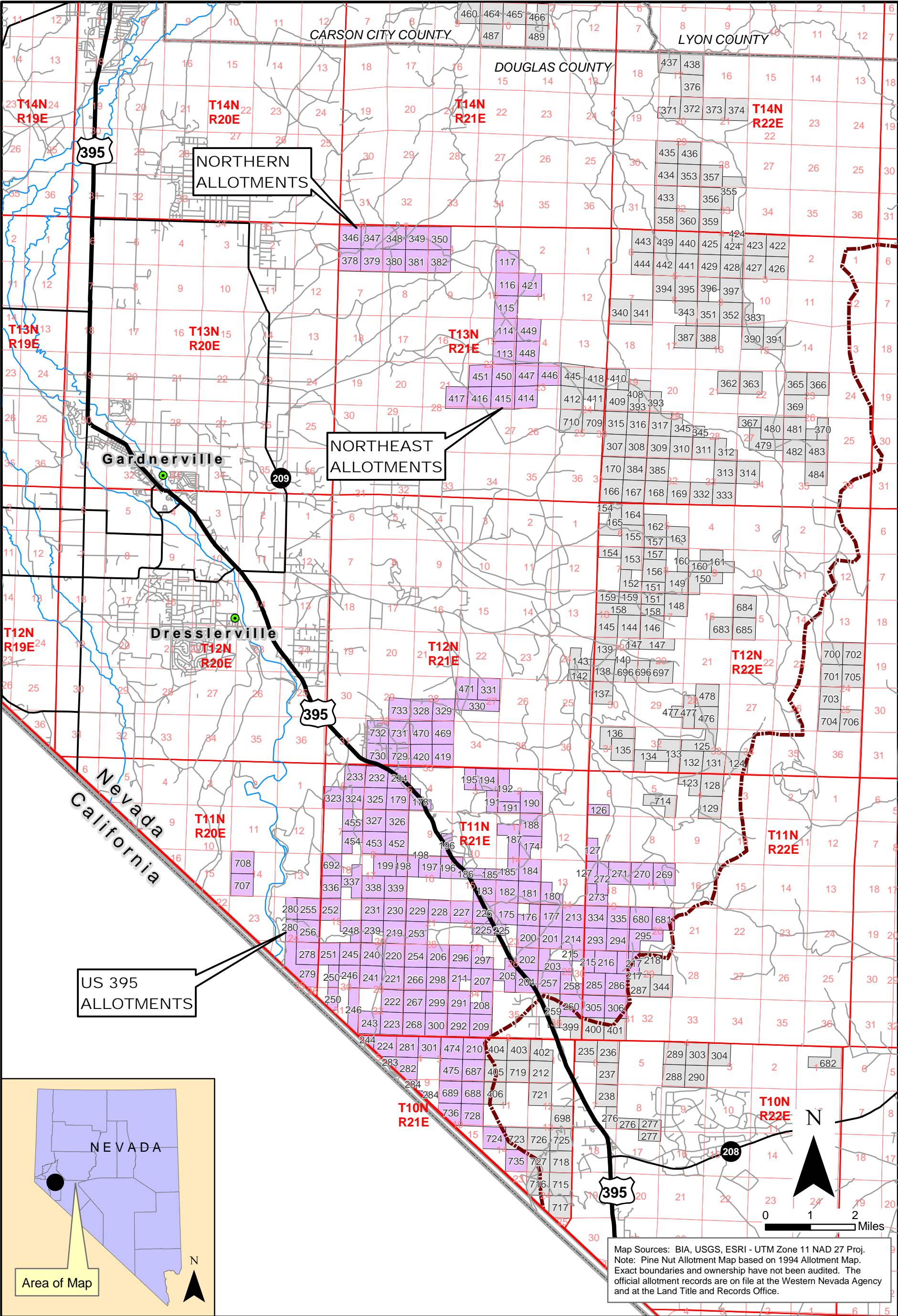


Figure 1-1

Study Area

Pine Nut Allotments, Douglas County, Nevada

Map Prepared by Cascade Design Professionals, Inc., Jan. 2009

- Legend**
- Carson River Watershed Boundary
 - Allotment Included in Land Use Plan
 - Allotment Not Included in Land Use Plan
 - Local Road
 - 50 Meter Contours

For purposes of this plan, the allotments have been divided into three clusters: the North Allotments (north-northeast of the Minden/Gardnerville urban area and east of the Minden-Tahoe Airport), Northeast allotments (east and slightly to the south of the North Allotments), and the US 395 Allotments (southeast of Minden/Gardnerville urban area along the US 395 corridor).

The North Allotments include 10 contiguous allotments. They are in an area of flat to rolling terrain and are accessed by various earth roads. The Northeast Allotments include 16 allotments and are also characterized by flat to rolling terrain. Elevations in both of these areas are less than 5800 feet.

The US 395 Allotments total 150. These allotments are in the Pine Nut Mountain Range which is very rugged, and elevations exceed 8,000 feet in many areas. US 395 climbs to around 6,000 feet within this highway corridor. Many of these allotments are in areas of steep slopes, and many do not have access or are far from the highway.



US 395 Allotments



PLANNING PROCESS

Taking into consideration contractual, regulatory and jurisdictional components, the planning effort included:

- Designation of “highest and best use” for each allotment based on a site suitability analysis, groundwater feasibility study, and development trend analysis.
- An analysis of the impacts of development of the allotments on the environment and public health and safety, and identification of appropriate mitigative actions.
- Development and recommendation of development standards based on the type and scale of potential land development.
- Development of lease structures and lease recommendations that ensure the landowners will receive revenues commensurate with the value of the property over the entire lease term.

The plan pertains only to developments that involve leasing structures. It does not and will not preclude personal development projects on allotments.

During the course of this planning effort, the consultant team maintained contact and consultation with federal agencies, and state/local government, and tribal governing bodies. In addition, “public meetings” were held in and around Carson City, one at the beginning of the project to disseminate information about the project and obtain information relative to community issues, needs and objectives, and prior to completion of the Plan to present a Draft Plan and obtain comments on it from affected landowners, federal agencies, and state/local and tribal governing bodies. Based on these comments, the draft was revised as appropriate. Summaries of the meetings are included in Appendix B of this Plan.



PLAN ORGANIZATION

This document includes:

- Background Data – A description of the physical features and socio-economic characteristics of the study area
- Plan Development – A summary of the results of the land use suitability analysis based on physical characteristics and identification of the highest and best use designations based on a growth trend analysis and results of the land use suitability analysis.
- Land Use and Development Procedural Plan – A description of the plan structure and the development process
- Impact Analysis – An evaluation of the impact of the various designated land uses on the allotments and surrounding environment and identification of measures to mitigate those impacts
- Implementation Measures/Strategies – A description of development standards and lease recommendations

Detailed descriptions of the analyses and their results are provided in Working Papers included in the Appendices to this document.



2 BACKGROUND DATA

The 176 Pine Nut Allotments included in this Plan comprise approximately 27,130 acres, all of which are located in Douglas County, Nevada. The area from Carson City south to the Pine Nut Mountains is known as the Carson Valley, with the Carson River running through it on a south-to-north course. The Valley extends from the Pine Nut Mountains on the east to the foothills of the Sierra Nevada Mountains on the west. U.S. Hwy 395 is the main highway connecting the Carson Valley to points north and south. Minden/Gardnerville is the main urban center about 60 miles south of Reno.

The Sierra Nevada Mountains reach 11,000 feet above mean sea level, and peaks in the Pine Nut Mountains reach 9,000 feet. The elevation of the valley ranges from 4,600 feet, where the Carson River flows out of the area, to 5,000 feet above sea level.

The Northern Allotments are located in an area of flat to rolling terrain. Elevations in the area are less than 5,800 feet. The US 395 allotments are in the Pine Nut Mountain Range which is very rugged, and elevations exceed 8,000 feet in many areas. US 395 climbs to approximately 6,000 feet within this highway corridor.

PHYSICAL FEATURES

Climate

The Carson Valley is an arid, high-desert basin bounded by the Sierra Nevada Mountains to the west and the Pine Nut Mountains to the east. In the Carson Valley area, summers are warm and dry at the lower elevations and cool and dry at the higher elevations. Winters are cold with occasional severe cold spells. In the Pine Nut Mountains the continental climate is characterized by short, hot summers, and moderately cold winters.

The average annual maximum temperature for the area is 89 degrees F., and the average annual minimum temperature range is 19 degrees F. July is the warmest month and January is the coldest month.

Located in the rain shadow of the Sierra Nevada, the Carson Valley floor receives an average 10 inches of precipitation per year, while the Sierra Nevada Mountains receive as much as 45 inches of precipitation per year, and the Pine Nut Mountains as much as 26 inches per year.

Vegetation

Vegetation varies widely throughout the Pine Nut Allotments and surrounding area. Major vegetation types include:

- Pinon Pine
- Juniper
- Mountain Mahogany
- Big Sage
- Mormon Tea
- Rabbit Brush
- Bitter Brush
- Other Minor Species (sagebrush, cheat grass, blue grass, greasewood)

Higher elevations are predominantly forested with Pinon Pine and Juniper, and the lower lying areas are predominantly sagebrush and cheat grass.

Water Resources

The most significant surface water feature in the Carson Valley is the Carson River, which flows northward through the central part of the valley. The Carson River drains several ephemeral drainages originating in the Sierra Nevada and Pine Nut Mountains, and is a major source of irrigation water.

Groundwater in the Carson Valley flows from the margins of the valley towards the Carson River in the center of the valley, and then northward along the Carson River. The US Geological Survey identifies three water-bearing units in the Carson Valley:

- Unconsolidated Alluvium – Primary aquifer in the Carson Valley, with a groundwater yield sufficiently high to support irrigation, municipal and domestic demands; depth to groundwater ranges from 5 feet below ground surface near the Carson River to greater than 100 feet at the margins of the valley.
- Tertiary Sediments – Include clays with interbedded discontinuous sand and gravel lenses; supply water primarily for domestic purposes.
- Bedrock – Fractured zones in the volcanic and sedimentary rock; supply water primarily for domestic purposes.

Water resources investigations show that aquifers exist at various elevations in the area of the north allotments and northeast allotments. The shallow aquifer supplies most of the development in that area. However, this aquifer appears not to be fully recharging, and as a result, long-term supply will probably need to come from a deeper aquifer. Well yields also vary in the area.

Groundwater is available in the southern area (southeast of Minden/Gardnerville urban area along the US 395 corridor), but primarily to the west of the highway in basalt deposits. Aquifers occur at various elevations, some of which are as deep as 1,600 feet.

Geology/Soils

The Carson Valley was formed by volcanic, tectonic and erosional events during the past 240 million years. The oldest geologic units in the Carson Valley are 138 to 240 million year old volcanic and sedimentary rocks deposited in the Jurassic and Triassic Periods. During the Cretaceous Period (63 to 138 million years ago), granitic magma of the Sierra Nevada batholith intruded into the Jurassic and Triassic sedimentary rocks, forming the basement rock of the Carson Valley and a majority of the Pine Nut and Sierra Nevada Mountains. A long period of erosion followed the intrusion, until approximately 10 million years ago when basin and range faulting created present day topography by dropping the valley floor and uplifting the Sierra Nevada and Pine Nut Mountains. Erosion of the newly-formed highlands

resulted in deposition of Tertiary Sediments, consisting of 40 to 80 foot thick clay beds with 10 to 20 foot thick sand and gravel interbeds over most of the valley floor. Continued faulting between 15 and 5 million years ago tilted the Tertiary sediments towards the west, and Tertiary Andesites and Basalts erupted along the southern and western sides of the valley. During the last 2 million years, continued erosion of highlands filled the Carson Valley, covering the Tertiary Sediments with Quaternary Alluvium. The combined thickness of basin fill in the Carson Valley (i.e., Tertiary Sediments and Quaternary Alluvium) ranges from 5,000 feet to 2,000 feet on the west and east sides of the valley, respectively.

DEMOGRAPHICS

Population

Table 2-1 shows population growth in the three parts of Western Nevada that comprise the region evaluated.

Table 2-1 Population Growth in Western Nevada, 1980 – 2008						
	1980	1990	2000	2006	2008	%Δ 1980-2008
Douglas County	19,921	27,637	41,259	45,909	45,180	126.8%
Carson City	32,022	40,443	52,457	55,289	54,867	71.3%
Washoe County	193,623	254,667	339,486	396,428	410,443	112.0%
Total	311,043	324,737	435,202	499,632	512,498	64.8%

Source: US Census Bureau, Decennial Census Counts and Estimated Count for 2006 and 2008

The data show that Douglas County has been experiencing the highest growth rates of the three areas measured, with an increase of 126.8% from April 1, 1980 to July 1, 2008. Carson City grew by a little over one-half that rate, at 71.3%, while Washoe County increased by 112.0%.

In numerical terms, Douglas County grew by 25,259 people while Carson City grew by 22,845 people, nearly the same amount as Douglas County. However, Washoe County added 216,820 people which was 9.5 times the numerical growth in Douglas County. Both Douglas County and Carson City showed slight declines in population between 2006 and 2008 as the US entered into recession, but Washoe County showed continued growth. According to data released in 2007 by the Center for Regional studies at the University of Nevada Reno, these trends are going to change in the future. Their report estimates that between 2008 and 2026 these three areas will grow as shown in the following table.

Table 2-2 Population Growth Forecasts, 2008-2026				
	2008 Population	2026 Pop. Est.	# Change	% Change
Douglas County	45,180	66,064	20,884	46.2%
Carson City	54,867	79,134	24,267	44.2%
Washoe County	410,443	586,248	175,805	42.8%
Total	512,498	731,446	218,948	42.7%

Economy

Table 2-3 lists the largest employers in the commercial/industrial sector in Douglas County. This list excludes school districts and health care providers that are also large employers.

Table 2-3 Douglas County's Largest Commercial/Industrial Employers				
Employer	City	Industry	Code	Number of Employees
Harrah's Stateline	Stateline	Casino Hotels	721120	1,500 - 1,999
Harvey's Resort Hotel Casino	Stateline	Casino Hotels	721120	1,000 - 1,499
Horizon Casino Resort	Stateline	Casino Hotels	721120	800 - 899
Bently Nevada	Minden	Industrial Process Variable Instruments	334513	600 - 699
Douglas County	Minden	Executive & Legislative Offices Combined	921140	600 - 699
Carson Valley Inn	Minden	Casino Hotels	721120	500 - 599
Lakeside Inn & Casino	Stateline	Casino Hotels	721120	300 - 399
Travel Systems Limited	Zephyr Cove	Food Service Contractors	722310	200 - 299
Resorts West A Nevada Partner	Stateline	Hotels (except Casino Hotels) and Motels	721110	200 - 299

Source: Nevada Department of Employment, Training and Rehabilitation (DETR)

This list clearly shows that the gaming industry dominates commercial/industrial employment in Douglas County and that most of this sector is located at Lake Tahoe rather than in the valley. However, the valley is reported to be a major residential location for gaming-industry workers because of the lack of available housing and the high prices of land and houses at the lake. Several of the casinos have their own shuttles that pick up employees in the valley and take them to work at their facilities at the lake.

For that reason, the gaming industry at Lake Tahoe and other areas in the region add to the demand for residential housing in the Carson Valley.

Table 2-4 shows, by industrial sector, employment in Douglas County.

Unfortunately, the gaming industry has been declining since 2003, from 9,201 in 2003 to 8,246 in 2006 for a decrease of more than 10%. The statistic for 2007 is for the first quarter only, so it is not known whether the annual average will also show the slight increase indicated in Table 4. If the pattern of decline continues, then this sector will not stimulate additional housing demand in Douglas County in at least the near future.

The construction sector showed positive growth from 2003 through 2006, but the decline in the 1st Quarter of 2007 reflects the major recession that hit this industry in the past year. With serious turmoil in both the housing construction sector and the mortgage lending industry, it is not expected that there will be recovery any time soon.

Manufacturing appears to be relatively healthy, with an increase in employment of 6.8% between 2003 and the 1st Quarter of 2007. However, the Carson Valley has relatively few manufacturing employers and the number of workers reflects only about 8.4% of all employment, compared to a national average of about 9.8%. Diversifying the economic base and recruiting more higher wage manufacturing industries is a goal of regional economic development efforts.

**Table 2-4
Douglas County Employment by Industry**

Industry	2003	2004	2005	2006	1st Quarter 2007
Total All Industries	20,879	21,685	21,622	21,645	21,414
Total Private Coverage	18,696	19,456	19,333	19,347	19,140
Natural Resources & Mining	162	181	176	175	160
Construction	1,740	1,934	2,183	2,029	1,846
Manufacturing	1,709	1,713	1,753	1,802	1,826
Trade, Transportation & Utilities	2,528	2,764	2,795	2,863	2,824
Information	235	221	197	230	214
Financial Activities	707	791	865	774	804
Professional & Business Services	1,230	1,396	1,572	1,702	1,527
Education & Health Services	802	884	1,054	1,149	1,149
Leisure & Hospitality	9,201	9,145	8,363	8,246	8,436
Other Services	373	377	350	361	336
Government	2,183	2,230	2,289	2,298	2,274

Source: Nevada Department of Employment, Training and Rehabilitation

Trade, transportation and utilities have been a growth sector, gaining 11.7% employment from 2003 to the 1st Quarter of 2007. In part, this reflects the growth of the retail trade industry in response to the increased population in the county.

The professional and business services sector has also shown strong growth, increasing by 24.1% over the period shown in Table 6. This is the fastest-growing sector in the U.S. economy and the data show that Douglas County is participating in that growth.

Education and health services showed the strongest growth, increasing by 43.3%. This sector also pays the highest annual mean wage in Douglas County at \$42,853 according to the latest data available. It represented 5.4% of total employment in the county in the 1st Quarter of 2007.

In general, the current slump in the housing and mortgage finance industry is likely to cause static overall employment levels for at least the short term. The decline in gaming industry employment will also dampen growth in Douglas County. There are currently no obvious “drivers” for rapid growth although there are continuous efforts to recruit new companies to the area through economic development efforts.

EXISTING LAND USE

Existing land use is primarily public and private forest and range lands with minimal residential development. Existing development is concentrated along Pine Nut Creek and the US 395 corridor.

The vast majority of the Pine Nut Allotments are undeveloped. What housing exists is scattered along the US 395 corridor. The



Pine View Estates

only residential development is Pine View Estates, which is located adjacent to the US 395 approximately 7 miles southeast of Gardnerville at Cedar Flat. The development includes approximately 200 single-family homes.

Commercial development occurs mainly along US 395 in the communities of Minden, Gardnerville and Dresslerville. The Holbrook Junction area offers the only commercial facilities along US 395 through the Pine Nut Mountains, along with the lodge and other services at Topaz Lake.

Some of the Pine Nut Allotments are under commercial leases for livestock grazing purposes. In the upper elevations, allotment owners also harvest pine nuts commercially. Also, the use of off-road vehicles for recreation is popular in this area. Because very few of the Pine Nut Allotments are fenced or have been surveyed, trespass is an ongoing problem, especially with those with off-road vehicles and with some pine nut harvesters. The general public does not always know where the boundaries are for public land, Indian Lands, and other private lands.

COMMUNITY FACILITIES AND SERVICES

There are no schools located in the area of the Pine Nut Allotments. Elementary students attend various Carson Valley schools, and all middle and high school students attend Carson Valley Middle School and Douglas High School, respectively.

In the US 395 area, power and communications are in place along US 395. With the exception of the Pine View Estates, there are currently no other community sewer systems in the planning area. Sewage disposal is provided by individual sewage disposal systems. Also, with the exception of the Pine View Estates, there are no community water systems in the planning area. Water is provided by individual wells. Solid waste collection and disposal services are provided by Douglas Disposal, Inc. Currently, there are no landfills in Douglas County. Waste is received either by collection trucks or by local residents at a transfer station west of US 395, south of Gardnerville, and south of Pinenut Road. It is then transported to the Lockwood Landfill in Storey County, which is owned and operated by Reno Refuse, Inc.

Fire protection and emergency services are provided by the East Fork Fire and Paramedic District. The District is one of three fire protection districts in Douglas County and serves approximately 600 square miles. The district supports 13 fire stations, 8 of which are all volunteer. The District provides structural firefighting, emergency medical services, wildland firefighting and operations-based hazardous materials response. Fire protection is also provided by the Bureau of Land Management and the US Forest Service.

TRANSPORTATION

US Highway 395 is the major north-south link to urban centers to the north, traversing the southern portion of the allotments north to Gardnerville, Minden, Carson City, and Reno. State Route 3 joins US 395 at Holbrook Junction. Other access to the allotments is provided by Leviathan Mine Road which extends west from US 395 into the southwestern portion of the allotments; Pine Nut Road which extends east from US 395 just north of Dresslerville into the central portion of the allotments; and the "Sunrise Route" which extends east from the highway just north of the Douglas-Tahoe Airport into the northern portion of the allotments. Most of the other roads in the area are unimproved dirt roads or trails suitable for trucks and/or four-wheel-drive vehicles only.

Bus and truck (shipping) service is provided along US 395. Rail and major air service are available at Reno, 50 miles north of the allotments. Local flights are available at the Carson Municipal Airport, about 20 miles north and the Douglas-Tahoe Airport, just north of Minden provides service for private flights only.

DRAFT



3 PLAN DEVELOPMENT

LAND USE SUITABILITY

Initial planning efforts centered on determining, based on physical characteristics, which of the approximately 176 Pine Nut Allotments included in this study would be suitable for major development and how they would rank from the standpoint of developers interested in entering into long-term lease agreements with allotment owners.

The first step in the analysis was to define criteria critical to development suitability. These criteria, described in Table 3-1, include:

- Topography
- Access
- Public Services
- Soils Suitability for Development
- Ownership

Topography and Access

Two criteria – topography and access – directly affect the cost of development and its attractiveness to developers and consequently were determined to be critical to the development potential of allotments.

Level land is the most economical to develop; as slopes become steeper, costs increase because of the amount of earthwork that becomes necessary to construct roads, utilities, and pads for buildings. In addition, the higher the elevation the greater the snowfall and longer the snow season and the more problems occur with snow removal to maintain access. Snow removal also has a direct cost impact on the homeowner. As a result, higher elevations are not attractive to developers or to prospective homebuyers.

From a developer's standpoint, the most desirable areas to develop are those that have or are adjacent to existing roads, particularly improved roads. The further away from an existing public road, the higher the development cost and the less attractive the allotment is to developers. In addition, if there is no public road providing existing access to an allotment, the problem of securing an easement through another allotment or allotments can become a major problem because of the fractionated ownerships of the allotments.

Table 3-1 Development Suitability Criteria		
Physical Characteristic	Criterion	Suitability Rating
Topography		
Slope	0-6%	Good
	6-9%	Fair
	9-12%	Poor
	12-20%	Very Poor
	Above 20%	Not Developable
Elevation	Less than 5800 ft.	Good
	5800-6500 ft.	Fair
	Greater than 6500 ft.	Not Developable
Access		
US 395 Allotments		
Distance to Paved Road	Adjacent to Paved Road	Good
	Less than 2 miles	Fair
	More than 2 miles	Not Developable
Existing Access Road	Yes	Good
	No	Not Developable
North & Northeast Allotments		
Distance to Paved Road	Adjacent to Paved Road	Good
	Less than 2 miles	Good
	More than 2 miles	Fair
Existing Access Road	Yes	Good
	No	Fair
Public Services		
Power & Communications	Less than 2 miles	Good
	More than 2 miles	Marginal
Accessibility to Groundwater	Less than 5200 ft. Elev.	Fair
	5200-6500 ft. Elev.	Marginal
	Above 6500 ft. Elev.	Very Poor
Suitability for Sewage Treatment	0-6% slope	Good
	6-9% slope	Fair
	9-12% slope	Poor
	12-20% slope	Very Poor
	Above 20% slope	Not Feasible
Soils Suitability for Development		
Building Site Development Suitability	Corrosion of Concrete	All criterion rated as follows: Good Fair Poor Very Poor Not Suitable
	Lawns & Landscaping	
	Golf Fairways	
	Local Roads & Streets	
	Shallow Excavations	
	Dwellings & Small Commercial Buildings	
Construction Materials	Sources of Gravel	
	Sources of Roadfill	
	Source of Sand	
	Source of Topsoil	
Land Management	Off Trail & Road Erosion Hazard	
	On Trail & Road Erosion Hazard	
	Suitability for Roads	
Recreational Development	Camp Areas, Picnic Areas, Playgrounds	
	Paths Trails, & Motorcycle Trails	
Sanitary Facilities	Suitable for Septic Tank Absorption Fields	
	Suitability for Sewage Lagoons	
Ownership		
Number of Allotment Owners	0-5	Good
	6-15	Fair
	16-30	Marginal
	31-50	Poor
	>50	Very Poor

Consequently, it was determined that some of the allotments were not suitable for development because of their elevation and/or slope or lack of access. These included:

Parcels above 6500 feet in elevation
Parcels with slopes greater than 20%
Parcels more than 2 miles from a developed road
Parcels with no existing access

The analysis indicated:

- All of the 26 North and Northeast allotments are totally, or in part, developable and could be attractive to developers.
- Of the 150 US 395 allotments, 39 are suitable for development and 15 had marginal suitability. The remaining 101 were considered unsuitable for development and were designated for cultural, recreational, or natural resources uses.

Public Services

Proximity to Power and Communications

As with roads, the proximity of power and communication systems, as well as the ability to extend these systems, is a development concern, particularly if easements need to be secured across other allotments. Any allotment over two miles distance from service was considered undesirable for development within the near future.

Water Supply and Quality

Based on discussions with local officials and BIA personnel, the extension of water service from existing public systems is not a viable option in serving the allotments. As a result, the assumption is that each development will need to rely on groundwater for domestic use, whether in a community system, depending on development densities, or individual wells for each property. A Groundwater Supply and Feasibility Study conducted as part of this project (Appendix E) investigated groundwater availability, sustainability and quality. The analysis indicated that all areas have availability and long-term sustainability concerns, depending on the location. Below the 5200 foot elevation, potential for groundwater is fair. Between 5200 feet and 6500 feet, the potential is marginal. Also, wells at these elevations are likely to be deeper and therefore more costly to develop. The potential for groundwater above 6500 feet is very poor. Groundwater quality is also of concern, but information was not definitive to use as a criterion. However, the investigation showed that groundwater may need to be treated for sulfate, iron, arsenic, and manganese and, as a result, testing for water quality will be essential and potential developers need to be prepared to treat groundwater for domestic uses.

Sewerage Facilities

As with water supply and distribution, the extension of sewer service from an existing public system is not a viable option in serving the allotments. As a result, the assumption is that each development will need to provide for sewage collection and treatment whether in a community system or individual systems. Density of development and terrain impact the viability and cost of sewage collection and treatment. Community collection systems can be viable up to approximately one-acre parcels. Lower densities will

require individual systems for each house. Relative to terrain, the steeper the terrain the more problems in finding appropriate sites and the more cost in constructing these systems. Slopes of over 20% were considered non-viable; usually, soils are very shallow at these slopes, sometimes soils have to be imported for subsurface systems and excavation costs can become prohibitive.

Soils Suitability for Development

A Rangeland Resource Inventory conducted by the BIA and the USDA Natural Resources Conservation Service (NRCS) for the Pine Nut Allotments rated the suitability of the various soil types to support differing uses. Five critical suitability factors, shown in Table 3-1, were evaluated for residential, commercial, and light industrial development. These factors were considered critical because they have a direct correlation to the cost of development. As the soils suitability decreases, costs for development increase. However, poor soil conditions do not preclude development. Soil problems can be overcome, but it adds to the cost of development and impacts the overall feasibility of a proposed development. A detailed description of the soils suitability analysis for the 80 allotments considered to be attractive to developers is contained in the Land Use Suitability Report in Appendix C of this Plan.

Ownership

The number of owners for each allotment is a factor that affects the desirability of an allotment to a developer. Ownership numbers for the Pine Nut Allotment range from one to well over 100 in a number of cases. The fewer owners, the more chance that consensus can be reached and in a shorter time frame. The more owners, the less chance that even a majority can be reached. Realistically, a developer is not going to be attracted to allotments with more than 15 owners.

FINDINGS

Based on the characteristics discussed above, the following findings were identified. A summary table of the findings is contained in Appendix C. Overall land suitability is shown in Figure 3-1.

North Allotments

All of the 10 allotments in this area are totally, or in part, developable. Only one allotment has potential slope problems in some areas, but development can be designed to avoid that portion of the allotment. Rural residential development is extending from the west and is almost at the western allotments in the group. Public roads and power and communication systems are also in proximity and will likely be extended to the east as urbanization occurs.

In general, soils suitability for shallow excavations and for construction of dwellings or commercial structures is not particularly good. Also, ratings for community sewage lagoons are very poor in this area. However, a number of soils have fair suitability ratings for septic tank drainfields. As a result, large lot development, similar to that which has occurred to the west of these allotments, with individual septic tanks with drainfields may be possible in some areas. Otherwise, community wastewater treatment facilities probably will be necessary and will increase the cost of development.

The number of allotment owners in this area is fairly attractive as well, since over half have 15 or less owners, although none has five or less owners.

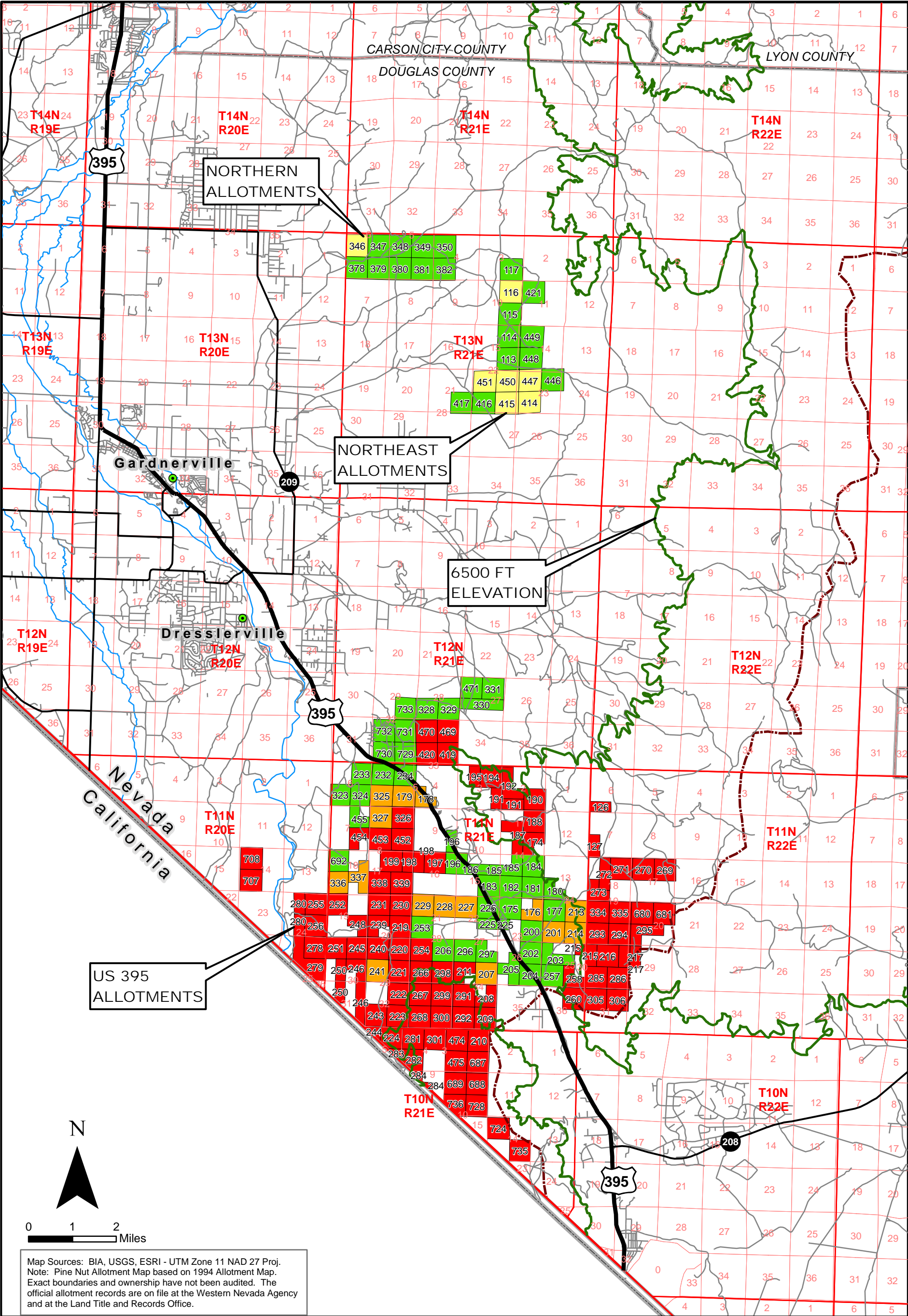


Figure 3-1

Development Suitability

Pine Nut Allotments, Douglas County, Nevada

Map Prepared by Cascade Design Professionals, Inc., Jan. 2009

Legend

- 6500 Ft. El.

Local Road

Carson River Watershed Boundary

50 Meter Contours

Development Suitability

Good

Fair

Marginal

Not Developable

Northeast Allotments

All of the 16 allotments in this area are totally developable. Although further to the east than the North Allotments, rural residential development from the southwest will eventually extend to this block of allotments over the mid term and long term. Public roads and power and communication systems also will be extended with this development eventually making these allotments very attractive for development.

Soil problems in this area are similar to the North Allotments—not particularly good for shallow excavations and for dwellings and small commercial structures. Likewise, there are some soil types where septic tank drainfields will probably be possible, and could support low density development.

The number of allotment owners is also workable for many of these allotments as half have 15 or less owners and five allotments have 5 or less owners.

US 395 Allotments

The US 395 corridor has a variety of terrain and elevation issues as well as access problems. The analysis shows that 39 allotments are suitable for development, 15 have marginal suitability, and 96 are not suitable. (See Figure 3-1 for the locations of developable allotments.) The most attractive allotments for development lie adjacent to US 395 where access is direct and there is fairly level terrain. A few other allotments are also attractive on the north and northwest boundary of the allotments, due to favorable slopes and existing access.

It should be noted that several allotments were included even though they did not strictly meet development criteria, because they were either adjacent to US 395, had other access, or had fairly level terrain.

The biggest problems for development along this corridor are excessive slopes, high elevations, and lack of access and/or excessive distance from US 395. Also, groundwater availability diminishes east of US 395.

Because of the steeper terrain and shallow soils, soil conditions in this area are less desirable for development than the northern allotments. One of the biggest development cost factors in this area will be the need for community sewage treatment systems as almost uniformly the soils are not suitable for either septic tank drainfields or for community lagoon systems. As was the case with the Pine View development, wastewater treatment plants most likely will be required. Also, soil suitability for shallow excavation and for dwellings and small scale commercial developments is not very good and will be a problem in areas where slopes increase.

Ownership is a much bigger issue in this area. Overall, only 32% of the allotments have 15 or less owners and 13% have five or less owners. However, 31% of the allotments have 50 or more owners, including a number with over 100 owners.

HIGHEST AND BEST USE DESIGNATION

As part of plan development, a development trend analysis of the Pine Nut region was conducted (Appendix D). The analysis looked at overall growth trends and projections, patterns and types of growth and development, growth and development in relation to the allotment areas, and influences on the allotment areas. Results of the analysis indicated that the allotment areas are subject to overall growth influences in Douglas County, but do not have specific influences affecting their short-term or near-term development potentials. Development of individual allotments will be in response to opportunities as they arise, but cannot be predicted in advance based on development patterns and trends. Based on this analysis, as well as the land use suitability analysis, the following highest and best land use designations were assigned.

Northern Allotments (North Allotments, Northeast Allotments)

The northern allotments appear to offer the best opportunities for larger scale development, either as residential subdivisions or as a planned community such as a senior retirement center. The land is relatively flat, accessible with road construction, and relatively close to existing development. If there are no significant barriers to development, these allotments appear to have the greatest value if they are combined into these kinds of larger scale development. The area is also suitable for multiple lots but economies of scale in developing infrastructure support higher densities.

US 395 Allotments

Northwest Transition Area between Pine Nut Mountains and Carson Valley

The northwest end of the US 395 allotments where the road transitions between the Carson Valley and the Pine Nut Mountains includes the Ruhenstroth community area as well as the Pine View Estates. This is the last area of urban zoning southeast of the Gardnerville ranchettes before leaving the Carson Valley and climbing the grade into the Pine Nut Mountains and includes large tracts of land owned by the Washoe Tribe. The predominant lot size is one acre in the residential area. There are also some industrial uses, primarily related to resource industries and service facilities.

Further development of this area may cause residential demand to extend southeastward into the Pine Nut allotments. Some of the allotments offer better view properties because of the elevation gains.

"Highest & Best Use"
North Allotments <i>Larger-scale, planned development such as residential subdivisions or self-contained communities such as a retirement center or resort.</i>
Northeast Allotments <i>Larger-scale, planned development such as residential subdivisions or self-contained communities such as a retirement center or resort.</i>
US 395 Allotments <i>Single-family residential development or small subdivisions on the flatter parcels in the area between the Pine Nut Mountains and Carson Valley</i> <i>Horse ranches or other "lifestyle" homesites in the Topaz Lake—Holbrook Junction Area, at the southern end of the Pine Nut Mountains</i> <i>Single-family residential development in the flatter allotment areas in the central Hwy 395 Allotments, close to the highway for families that want relative isolation and a rural lifestyle</i> <i>Essentially no development potential beyond the flatter areas for allotment east and west of the highway; retain for cultural, recreational, or resource uses</i>

There are also some allotments suited for single-family developments both southwest and northeast of US 395. It is expected that any such demand will be on an individual lot basis rather than for planned subdivisions such as Pine View Estates.

Topaz Lake – Holbrook Junction Area

This area offers the only commercial facilities along US 395 through the Pine Nut Mountains, along with the lodge and other services at Topaz Lake. The area has several planned developments and/or subdivisions in addition to the commercial facilities at Holbrook Junction. Areas along US 395 are platted for lots ranging in size generally from one acre to five acres. While some of these have been built out, there are still many lots available for sale or for resale. There is also a long-term plan to construct up to 5,000 residential units on the east side of Topaz Lake.

This area essentially anchors the southern end of the Pine Nut allotments, putting residential communities at both ends of the US 395 corridor, along with some commercial facilities. As the county's population grows, it can be expected that demand for residential land will gradually infill toward the middle.

Some of the allotments at the southern end of the Pine Nut Mountains could be developed for horse ranches or other “lifestyle” home sites similar to existing subdivisions. Lot sizes would be in the two-acre to five-acre range.

Central US 395 Allotments

The Central US 395 area between Pine View Estates on the north to the Holbrook Junction area to the south comprises a small amount of single-family residential development, generally on small acreages. There are some properties developed specifically for horse ranches offering a rural lifestyle that may not be available in the more urbanized areas. Most lots range from two to five acres in size.

Any additional development in this area will probably fit the same pattern. This is not an area that is conducive to residential subdivisions in part because of its relative isolation from community services and also because of more severe winter weather conditions that would impact workers commuting to jobs in Gardnerville or Minden. That will also limit the development of community infrastructure systems, favoring wells and septic systems that also suggest larger lots.

Flatter allotment areas close to US 395 are suitable for single-family residential development for families that want relative isolation and a rural lifestyle, generally with lots in the two-acre size range. Difficult commuting during the winter months makes the area unsuitable for family-oriented subdivisions.

Areas East/West Areas of US 395

All of these remaining allotments are located in the rugged hills, valleys and mountains farther off Highway 395. Beyond the flatter areas, there is essentially no development potential. These areas were designated to be retained for cultural, recreational, or resource uses. Most of the slopes are too steep for any kind of development, including construction of wells and septic systems. While there are some spectacular views from some of the higher areas, the severe winter weather conditions above about 6,500 feet would completely isolate these areas for several months of each year.

LAND USE AND DEVELOPMENT PLAN



4 LAND USE AND DEVELOPMENT PROCEDURES

PLAN STRUCTURE

Because of the unique status of the Pine Nut Allotments, they are not subject to the jurisdiction of any city, county, or state government; and therefore, there is no comprehensive plan, public policies, or development process in place to control or direct land use. Allotment owners are only subject to federal laws and regulations and, to some extent, have the right to develop their lands for any use they so desire. As a result, developing a traditional land use plan, along with appropriate zoning, is not a workable option.

Any development proposal requiring a Master Lease will be dependent on the willingness of the allotment owners to agree to have their allotment developed and a responsible, private sector developer (lessee) as well as local market conditions at any point in time. Therefore, it is impossible to predict where or when development might occur or exactly what types of development will occur, if at all.

In the instance of the Pine Nut Allotments, the Plan is a **procedural plan** that consists of a development process with accompanying development standards. This will ensure that developments meet appropriate standards for public health, safety, and general welfare, which in turn protects the value of the land for the allotment owners over the long term. In addition, neighboring allotment owners will be afforded a degree of protection against nuisance uses and any negative impacts from developments. As a result, development proposals will be evaluated through a uniform process and on their own merits.

The process and standards spelled out by this Procedural Plan are similar to normal land development requirements at a city or county level, and as such, should be fairly familiar to land developers, although there are some post-development requirements that are related to the BIA trust responsibility and are important to the allotment owners and to the sub-lessees. Again, the components of the Plan are focused on a process that allows land to remain in Indian ownership and the potential to realize better economic return to the allotment owners over the long term.

The Procedural Plan involves a three stage process: pre-development, development, and post-development. The pre-development stage includes site planning, environmental analysis, establishing agreements for utilities and public services, project approval, and if approved will end with the execution of a Master Lease. The second stage involves construction and ongoing inspections and will end with the issuance of a Certificate of Occupancy. The last stage includes ongoing monitoring, reporting, and enforcement to ensure that the terms and conditions of the Master Lease and the provisions of the development standards are maintained in order to protect the value of the land for the allotment owners.

DEVELOPMENT PROCESS

Pre-Development Process and Requirements

The Pre-Development Process is shown in Figure 4-1. Both BIA and developer responsibilities are shown in the flow chart.

Pre-development Conference

A Pre-development Conference will be held at the BIA Western Nevada Agency between the allotment owner(s), the developer (proposed Master Lessee), and BIA staff. The developer and allotment owner(s) shall brief the BIA as to the type of development being proposed. The BIA will in turn provide the developer with a fee schedule and checklist of requirements (as listed below) that must be met for the BIA to execute a lease. Based on the type, scale, and complexity of the proposed development, the BIA will also determine if the development will be a Type I Permit process or a Type II Permit process. The BIA will provide the developer with flow charts showing the basic steps and responsibilities in the pre-development phase, development phase, and post-development phase. The BIA will review the process with the developer and will supply the developer with a set of development standards for the Pine Nut Allotments (see Appendix G).

The checklist of pre-development requirements (Appendix I) will include but is not limited to the following:

- Proof that the applicant has or can obtain legal access, in perpetuity, from the allotment to a public road.
- The applicant must provide test results that show there is adequate groundwater to serve the proposed development and to maintain fire flows as specified by the International Fire Code when community systems are involved. In addition, groundwater quality must be tested to ensure that EPA and state standards for potable water are met. If treatment is required, the type of treatment must be identified.
- A boundary survey of the allotment will be provided by the applicant, and the surveyor will set all corner irons. In addition, topographic data must be provided for all areas anticipated to be disturbed during construction. A final plat delineating the area to be leased will be required. For housing subdivisions, the final plat will include all lots and street rights-of-way. The boundary survey and final plat will be filed with the BIA Land Titles and Records Office. At the discretion of the applicant, these documents can also be filed with the Douglas County Recorder's Office. Survey work must be conducted by a licensed surveyor in the state of Nevada.
- Existing Conditions Site Plan
- Preliminary Development Site Plan
- Mitigation/Remediation Site Plan
- Construction Management Site Plan
- Agency agreements for provision of utilities and public services
- Environmental Assessment or Environmental Impact Statement (if required), including a Cultural Resources Survey
- Engineer's Report (prepared by a licensed engineer in the state of Nevada) describing proposed systems for water supply, treatment (if necessary), storage, and distribution; sewage collection, treatment, and disposal; stormwater management; roads and streets; and provision of power and communications
- Traffic Impact Study

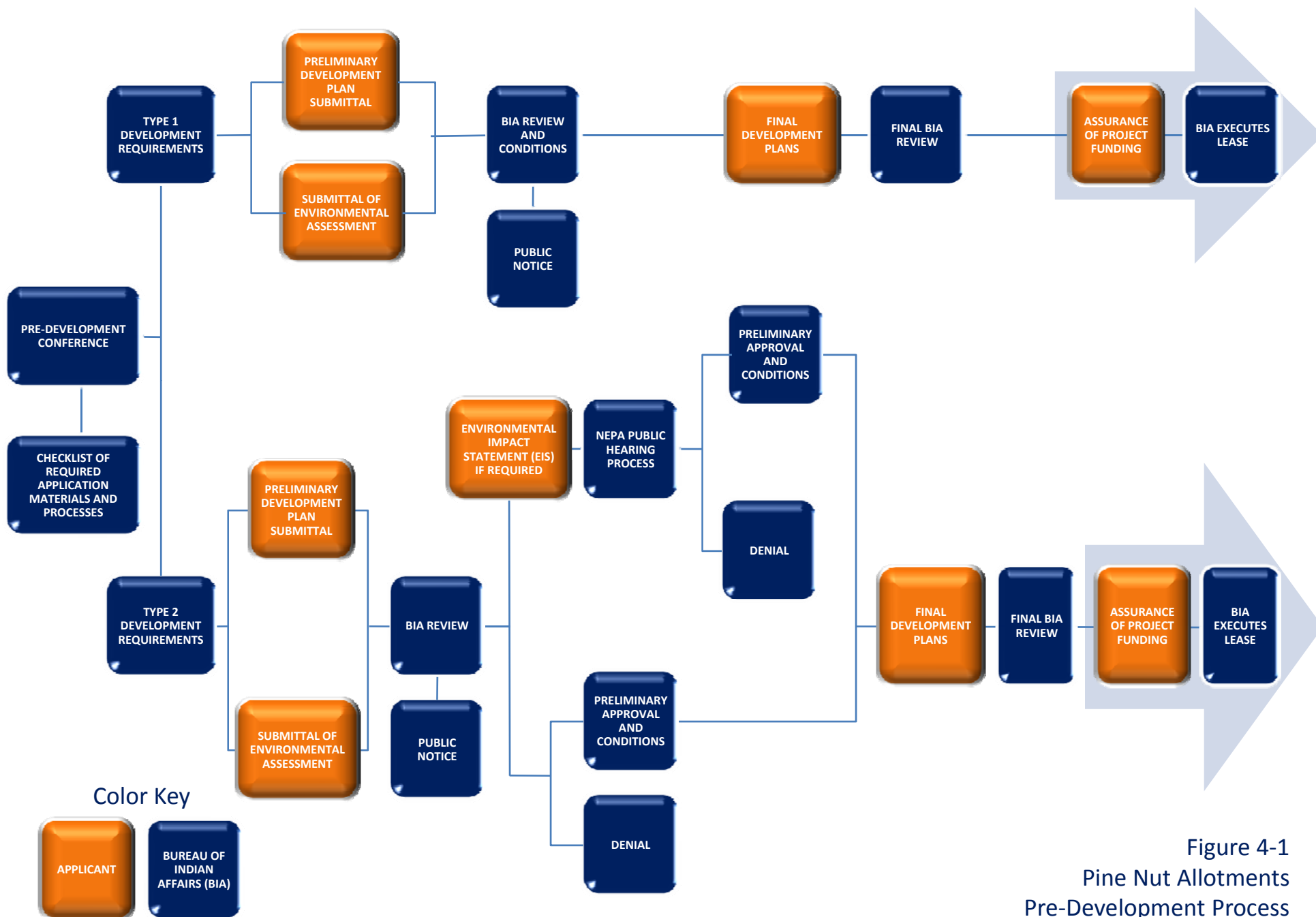


Figure 4-1
Pine Nut Allotments
Pre-Development Process

Preliminary Development Plan

Two site plans will be provided at a scale of no greater than 1 inch = 100 feet. The Existing Conditions Site Plan will show:

- Location of any existing structures and fences
- Setbacks from property boundaries of all existing structures
- Location of any existing utility lines, underground tanks, drainfields, roads, and easements
- Existing contour lines at 2-foot vertical intervals in areas of slopes < 10% and 5-foot intervals for slopes of > 10%
- 100 year floodplain and floodway boundaries if applicable
- Critical areas such but not limited to wetlands, areas prone to flash flooding, areas intermittently inundated, ponds, seeps and springs
- Drainage patterns shown by arrows indicating direction of flow
- Location of trees of greater than 6-inch in diameter at breast height
- Adjacent land uses

The Preliminary Site Plan will show:

- Location of all proposed development (including but not limited to roads and streets, buildings, pathways, driveways, decks, retaining walls, and any other structures)
- Rights-of-ways, lot lines (including lot size), and easements
- Location of proposed utility lines and connections, wells and water storage facilities, stormwater systems (water quality, detention and discharge), and septic or sewerage facilities
- Proposed final contour lines at 2-foot vertical intervals in areas of slopes < 10% and 5-foot intervals for slopes of > 10%
- Delineation of limits of temporary and permanent disturbance areas
- Location of existing trees over 6 inches in diameter that will be retained
- 100-foot buffer area around the perimeter of the allotment
- Project phasing (if proposed)

Determination of Lease Amount

A property appraisal will be conducted in order to determine the appropriate lease amount. The appraisal will be undertaken by a member of the Appraisal Institute who is agreeable to both the applicant and to the BIA or who is prequalified by the BIA.

Environmental Assessment/Environmental Impact Statement

A Type I Permit will only require the submission of a NEPA Environmental Assessment (EA). A Type II Permit will also require an EA and may also require an Environmental Impact Statement (EIS) if the EA identifies that there are significant impacts. In some instances, the BIA may identify at the outset (during the Pre-development Conference) that an EIS will be required.

The Environmental Assessment/Environmental Impact Statement must follow the NEPA process and guidelines and will be prepared by the developer. All anticipated impacts and any appropriate mitigation will be identified. As part of this environmental process, a Cultural Resource Survey will need to be conducted and documented.

If a Type II Permit requires an EIS, a public hearing also will be required. If only an EA is required, no public hearing is required.

Public Notice

On submittal of the Preliminary Development Plan and an EA/EIS to the BIA, the BIA will notify appropriate agencies and will also notify all allotment owners and fee land owners within one mile of the allotment boundaries in which the development is proposed. All notifications will be in writing. The BIA will maintain copies of the EA/EIS at the BIA Western Nevada Agency and at the BIA Western Regional Office for public review. The BIA will also post the EA/EIS on their web site, and may at its discretion provide copies in other locations in the project vicinity, such as public libraries, etc.

Public Hearing

If an EIS is required, the BIA will hold a public hearing on the Draft EIS at an appropriate location in the vicinity of the project. The BIA will present an overview of the project and will take public testimony. The BIA shall be responsible for documenting the public comments. Following the public hearing, a 30-day period will be available for the public to submit written comments.

Final Environmental Impact Statement

Following the 30-day comment period, the developer will prepare and submit to the BIA the Final NEPA EIS.

BIA Review and Conditions

The BIA will review the Preliminary Plan, and based on the findings in the EA or EIS and on public and agency review, the BIA will establish any appropriate development conditions and mitigation actions or the development application will be denied.

BIA Letter of Intent

The BIA will issue a Letter of Intent stating that the BIA intends to issue a lease if all conditions are met by the applicant. The letter will include the lease price, economic terms, time frame, and renewal options.

Final Development Plan

Based on the review of the preliminary plan and conditions set by the BIA, the developer will prepare the Final Development Plan and submit it to the BIA for final review. The Final Development Plan will consist of the Final EA (or EIS), Final Engineer's Report, Final Plat, and the following site plans at a scale of no greater than 1 inch= 100 feet.

The Existing Conditions Site Plan will show:

- Location of any existing structures and fences
- Setbacks from property boundaries of all existing structures
- Location of any existing utility lines, underground tanks, drainfields, roads, and easements
- Existing contour lines at 2-foot vertical intervals in areas of slopes < 10% and 5-foot intervals for slopes of > 10%
- 100 year floodplain and floodway boundaries if applicable

- Critical areas such but not limited to wetlands, areas prone to flash flooding, areas intermittently inundated, ponds, seeps and springs
- Drainage patterns shown by arrows indicating direction of flow
- Location of trees greater than 6-inch in diameter at breast height

The Final Site Plan will show:

- Location of all proposed development (including but not limited to roads and streets, buildings, pathways, driveways, decks, retaining walls, and any other structures)
- Rights-of-ways, lot lines (including lot size), and easements
- Location of proposed utility lines and connections, wells and water storage facilities stormwater systems (water quality, detention and discharge), and septic or sewerage facilities
- Proposed final contour lines at 2-foot vertical intervals in areas of slopes < 10% and 5-foot intervals for slopes of > 10%
- Delineation of limits of temporary and permanent disturbance areas
- Location of existing trees over 6 inches in diameter that will be retained
- 100-foot buffer area around the perimeter of the allotment
- Project phasing (if proposed)

The Construction Management Site Plan will include:

- Location of construction ingress and egress
- Location of equipment staging and stockpile areas
- Location and type of erosion control measure to be installed
- Identification of devices to be used to protect trees
- Location of temporary construction fencing

The Mitigation/Remediation Site Plan will include:

- Location and type of trees and other landscaping to be planted, including areas to be re-seeded with native grasses (identify seed mixture)
- Location and size of stormwater management facilities

Final BIA Review

The Final Plan will be reviewed by the BIA to ensure that all applicable regulations, development standards, and BIA set conditions have been met. If it is found that the aforementioned have been met, a Type I or Type II Permit will be issued. This permit will be valid for a period of two years. If after two years, substantial construction has not been initiated, the permit will expire. The BIA, at its discretion, can extend the permit for an additional year, if the developer can show just cause.

Assurance of Project Financing

Prior to issuing the Master Lease, the applicant must provide the BIA with a record of past performance and documentation of adequate financial stability. The applicant shall also provide proof of financial commitment for project funding from a reputable source(s).

Master Lease Executed

After issuance of the Development Permit and assurance of adequate financial backing, the BIA will prepare and execute a Master Lease with the developer in behalf of the allotment owner(s). The Master Lease will reference the Final Development Plan and Permit, the Pine Nut Development Standards, and other federal standards and local codes that are to be met. Memorandum of Lease can be filed with the County Records Office at the option of the applicant.

Development Process and Requirements

Figure 4-2 shows the development process as well as BIA and developer responsibilities. A checklist of development process requirements is provided in Appendix I.

Submission of Plans, Specifications, and Architect's/Engineer's Cost Estimate

After the Master Lease is in place, the developer will submit construction plans, specifications, and the architect's/engineer's cost estimate to the BIA Western Nevada Agency for review and approval. Plans and specifications must be in conformance with the Final Development Plan, the Pine Nut Development Standards, applicable federal regulations, the International Building Code, and any other codes or regulations deemed appropriate by the BIA.

Plans and specifications shall be stamped by a licensed architect and/or engineer licensed in the state of Nevada (or, in the case of the architect, prequalified by the National Council of Architectural Registration Boards).

Wastewater treatment and disposal plans and specifications shall be submitted to EPA for review and approval.

BIA Review

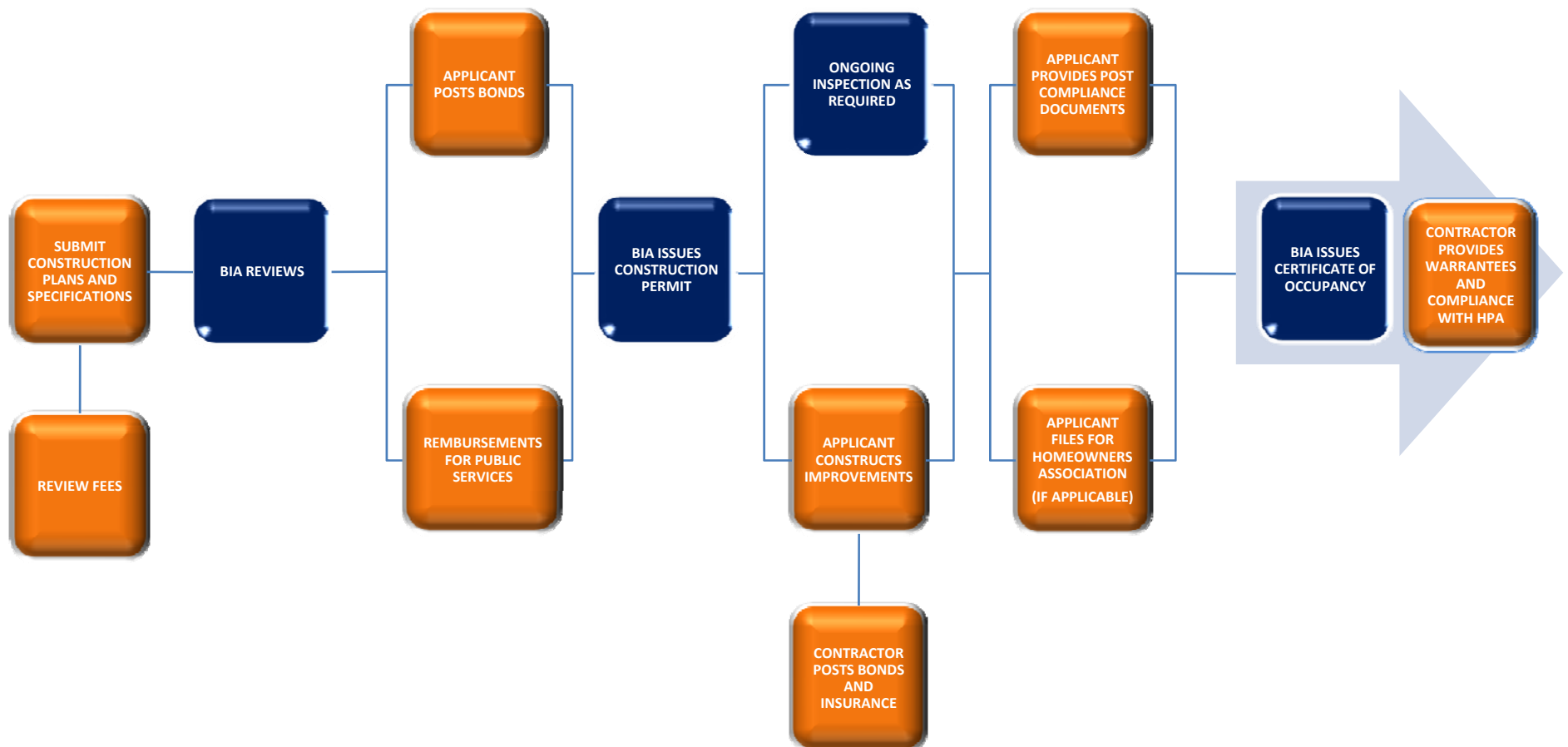
The BIA will review the construction plans and specifications for conformance to the above referenced standards, regulations, and codes.

Reimbursements for Public Services

Fees may be assessed to reimburse the cost of public services and may include but is not limited to:

- School Districts
- Police
- Fire
- Emergency Medical Response

Fees may be assessed on a one-time basis or on an ongoing basis. Fees assessed on a one-time basis will be paid by the developer. Fees assessed on an ongoing basis may be transferred to the homeowners association if applicable.



Color Key



Figure 4-2
Pine Nut Allotments
Development Process

Construction Permit Issued

If construction plans and specifications are approved, as well as approval by EPA, the BIA will issue a Construction Permit. This permit will be valid for a period of two years. If substantial construction has not been initiated during this period, the developer will be required to resubmit plans and specifications in order to renew the permit.

A Notice to Proceed will be issued by the BIA when evidence of the required bonding and insurance (see below) has been provided to the BIA.

Bonding

Security to be furnished by the Master Lease Holder

Prior to issuing a Construction Permit the Master Lease holder will post a performance bond (or adequate insurance coverage) in the amount of the construction price plus 10 percent with the BIA.

Security to be furnished by the Contractor

The successful construction bidder will be required to furnish and maintain in effect at all times during the contract period a performance bond in the sum equal to the construction price, and a payment bond also in the sum of the construction price. Copies of these bonds shall be provided to the BIA.

Bidders must be competent contractors who are licensed in the state of Nevada and bonded.

Insurance

The successful construction bidder will be required to carry Workers' Compensation Insurance, Builder's Risk Insurance, General Liability Insurance, Automobile Liability Insurance, and any additional insurance as appropriate (hazardous materials insurance, pollution liability insurance, etc.). Evidence of the insurance coverage will be provided to the BIA and the Master Lease Holder.

Construction and Ongoing Inspection

Construction inspection will be required to ensure that buildings and site work conform to the plans and specifications and appropriate codes in order to protect the health, welfare, and safety of the general public as well as protecting the value of the property for the allotment owners. Depending on the type, scale, and complexity of the proposed development, the BIA will require either periodic construction inspection at critical points during construction, or the BIA may require full-time, on-site construction inspection by a certified and independent third party.

Inspection reports will be required and will be submitted to the BIA in a timely manner. If full-time inspection is required, daily inspection reports will be submitted to the BIA.

Post Construction Compliance

The Master Lease Holder will submit to the BIA a set of As-build Drawings on mylar, a set of construction drawings on mylar, and certification by the architect and engineer that the project has been completed and was built in conformance with the plans and specifications.

Certificate of Occupancy

On completion of construction, including the functioning of all utilities, and a final inspection of all facilities, any items not satisfactorily completed or omitted or in noncompliance will be identified for correction. When these items are adequately rectified, the BIA will issue a Certificate of Occupancy.

Certificates of Occupancy can be issued by phase for those developments with more than one phase of construction.

Homeowners' Association

The Master Lease Holder will be responsible for filing for a Homeowner's Association for all residential developments involving home ownership in accordance with the general provisions from Chapter 116 – Common-Interest Ownership (Uniform Act) - Nevada State Revised Statutes. A copy of the charter and bylaws will be provided to the BIA.

Warranties

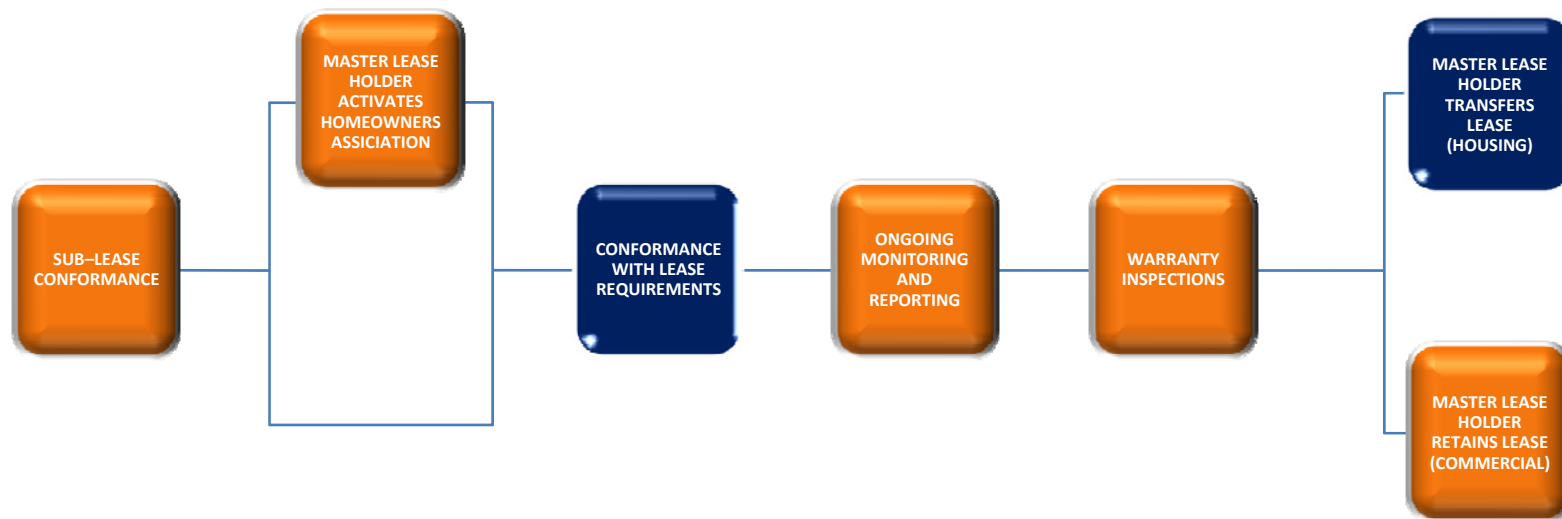
The contractor will provide the first sub-lease holder a warranty against defects and faulty workmanship for residential and commercial developments. Residential warranties will be for a period of one year, and commercial warranties will be for a period of two years. The contractor will also provide a maintenance schedule to each homeowner.

Notice of Compliance with Homebuyer Protection Act (HPA)

This notice will be required and the sale of new residences or remodel or improvement of residential property costing at least \$50,000 that is completed within three months of the sale of the remodeled or improved property. This is to protect the buyer against liens that may be filed on the improvements.

Post-Development Requirements

Figure 4-3 shows the post-development process. A checklist of post-development requirements is provided in Appendix I.



Color Key



Figure 4-3
Pine Nut Allotments
Post-Development Process

Sub-lease Conformance

The BIA will provide the Master Lease Holder with a model Sub-lease Agreement that will include all provisions and disclosures required by the BIA to be in the sub-lease. The Master Lease Holder shall provide copies of the sub-leases to the BIA.

Monitoring and Enforcement

The Master Lease holder will be responsible for specific reporting and maintenance of facilities. These will include but are not limited to the following.

Annual water quality testing: Water quality test results will be submitted to the BIA. If standards are exceeded, the Master Lease holder will submit a Corrective Action Plan to the BIA.

Water supply monitoring: Every 3 years, or more frequently if necessary, the Master Lease holder will test wells for yield and for static level. Results will be submitted to the BIA. If yields are not adequate to meet demand or if the static level falls, the Master Lease holder will submit a Corrective Action Plan to the BIA.

Community Sewage Treatment and Disposal Facilities: The Master Lease Holder will supply copies of all EPA required reporting to the BIA. If standards are exceeded, the Master Lease holder will submit a Corrective Action Plan to the BIA.

Conformance with Lease Requirements

The BIA will be responsible for ongoing monitoring to ensure that the Master Lease holder conforms to the conditions of the lease.

Warranty Inspections

Warranty Inspections will be conducted annually for the period of the warranty. Representatives of the Master Lease Holder (including architect and/or engineer) and contractor will conduct the warranty inspections. Any materials defects and problems resulting from faulty workmanship will be documented, and the contractor will be responsible for corrective actions. An inspection report will be provided to the BIA by the Master Lease Holder.

Transfer of Master Lease

In the case of residential development with home ownership, the Master Lease Holder can, at project completion, request that the Master Lease be transferred to the Homeowner's Association, or some other entity, as approved by the BIA. Project completion is defined as occurring when all public infrastructure and facilities are completed and operational, as well as any improvements to common areas, and 100% of the dwellings have been constructed and sold.

The Homeowner's Association may voluntarily request that the Master Lease be transferred to the Homeowner's Association prior to completion and/or sale of 100% of the homes. However, all public infrastructure and facilities are to be constructed and operational as well as any improvements to common areas. If approved by the BIA, the original Master Lease holder will then become a sub-lessee for all remaining undeveloped lots and/or unsold homes.



5 IMPACT ANALYSIS

METHODOLOGY

As part of the planning effort, the impact of the various designated land uses on the allotments and surrounding environment was conducted and measures to mitigate those impacts were identified. The impact analysis was based on the results of the Land Use Suitability Analysis and focused on a maximum development scenario from the Highest and Best Use Designations. Unlike most impact analyses, there is no specific proposed project to evaluate, making a detailed impact analysis impossible. Rather, this analysis utilized assumptions and only identified general impacts and areas of potential concern. The results of the impact analysis and recommended mitigation measures were used to recommend development standards and to develop an appropriate leasing structure that provides sufficient incentives to the developer while still ensuring the landowner of revenues commensurate with the value of the property over the entire lease term.

Precise development impacts are impossible to forecast for those allotments included in this study for several major reasons. First of all, these lands are not under the jurisdiction of any city, county, or state government; and therefore, with no comprehensive plan or public policies in place, it is impossible to predict, on potentially developable allotments, exactly what types of development will occur, if at all, when development might occur, or where development may occur. Compounding this situation is the fact that any moderate to large development will be driven by private sector developers in conjunction with allotment owners who are interested in leasing their land for residential, commercial, or industrial uses. A majority of the allotment owners must agree to any development proposal in order to go forward with a lease. An analysis of the ownerships showed that 70% of the allotments have more than 30 owners and some have as many as 150 owners. Only 17% of the allotments have 5 owners or less and 27% have 15 owners or less.

Because of these unique situations this impact analysis was limited to addressing general impacts based on one development scenario that would potentially produce the most severe impacts. Specific impacts and quantifiable impacts will need to be addressed in the leasing process through the requirement for each developer to prepare an Environmental Assessment or Environmental Impact Statement as the case may be.

The highest and best use as assessed in the Use Designation report showed that from a market perspective, rural housing development was overwhelmingly the likely use, and overall would have the highest impact on land use and demands on infrastructure and public services. The assessment was predicated on three basic steps to determine:

- The amount of net developable acreage
- The number of dwelling units that could be constructed
- The resulting population increase

Determining the amount of net buildable land involved several steps. The first involved reducing the gross acreage by the amount of a 100-foot buffer on the outer edge of each allotment in order to minimize impacts to adjacent allotments. The second step, based on looking at aerial photographs, was to estimate the percentage of developable land based on topography. Steep slopes over 20% are considered non-buildable. The remaining acreage was further reduced by 21% to account for roads and other infrastructure needs. The result is net acreage to support housing.

Based on the findings from the Land Use Suitability Analysis (Appendix C), the highest suitable density was assigned to determine the maximum number of dwelling units. High density was calculated at an average of half-acre lots, medium density at 2-acre lots, and low density at 5-acre lots.

To determine population impacts, the average household size for Douglas County (2.5 persons) was multiplied by the number of housing units. Table 5-1 below summarizes the development and resulting population data.

Overall, when taking into account the buffer area, unsuitable topography, and infrastructure needs, net acreage was approximately half of the gross acreage. Of 12,451 gross acres, there are approximately 6,148 net acres. This would support approximately 5,400 dwelling units and a resulting population in the order of 13,500, if fully developed for residential uses.

Table 5-1 Developable Area, Housing Units, & Population					
Area	No. of Allotments	Gross Acres	Net Acres	Dwelling Units	Population
North	10	1582	1044	1469	3673
Northeast	16	2560	1707	1962	4905
US 395 Corridor	54	8309	3397	1976	4940
Total	80	12451	6148	5407	13518

SUMMARY OF IMPACTS AND MITIGATION

The potential impacts based on this maximum residential development scenario are summarized in Table 5-2. The complete Impact Analysis is contained in Appendix F.

Overall, based on the development scenario presented, the major cumulative effect would be the change in character of the landscape in specific areas from undeveloped, unspoiled natural areas to rural and suburban densities of residential uses. Clearly the most significant changes would be the conversion of land use and the increase in traffic that it will generate, particularly in the North and Northeast Allotment areas where there is no development other than a few earth roads.

**Table 5-2
Summary of Potential Impacts and Required Mitigation**

Resource	Potential Impacts	Required Mitigation
LAND RESOURCES		
Topography	Minor modifications as a result of regrading for roads and infrastructure; estimated 2,900 acres disturbed	Finish grading will be required for major excavations; to be included in the Development Standards
Soils	Minor disturbances to native soils as a result of regrading for roads and infrastructure; estimated 2900 acres disturbed	Where excavation occurs, top soil will need to be stored and then replaced upon completion of construction
WATER RESOURCES		
	Reliance on groundwater sources for potable water and fire flows would require in excess of 12 mgd, annually amounting to more than 2,400 acre-feet of groundwater consumption	Wells will be required to be tested every 3 years for yield, drawdown, and depth to static water level to ensure adequate supply, particularly for fire protection
CLIMATE		
	No significant impacts	None
AIR QUALITY		
	Short-term dust generation during construction	Regular watering, application of approved dust palliative, or reseeded with native plants, depending on length of time disturbed areas are undeveloped
	Use of wood stoves in homes and other buildings can create air quality problems	Installation of EPA approved wood stoves
	Industrial or commercial use may produce airborne emissions	EA will be required to propose appropriate mitigation measures in order to meet applicable air quality standards
NATURAL RESOURCES		
Wildlife	No significant impact	None
Threatened or Endangered Species	Bald eagle and the Lahontan cutthroat trout are threatened species found in Douglas County – no impact to nesting or habitat areas; the Mountain yellow-legged frog, Webger's ivesia, and Tahoe Yellowcress are candidate species found in Douglas Co.- impact unknown	Impact assessments and mitigation measures will be proposed in the EA required for each lease
Vegetation and Habitat	Net loss of vegetation and habitat approximately 2,000 acres; no negative impact to Pinon pine areas	Post development, disturbed pervious areas will be reseeded with native plants; landscaping

**Table 5-2
Summary of Potential Impacts and Required Mitigation**

Resource	Potential Impacts	Required Mitigation
CULTURAL RESOURCES	Cultural resource location anticipated; extent and location unknown.	Cultural resources survey required as part of EA process for each development; appropriate mitigation measures included in EA
LAND USE	Approximately 2,900 acres of rangeland converted to rural residential use	100-foot buffer of nondevelopable area will be required around the perimeter of each allotment to protect neighboring allotments; EA for any development will identify any incompatible land use issues that would require mitigation
SOCIOECONOMIC CONDITIONS	Positive impacts to local economy (e.g. jobs, income from land)	No mitigation required
TRANSPORTATION	Significant increase in number of trips generated; degraded Level of Service, particularly Johnson Lane in North Allotments and along US 395	Each development application will require a traffic study to determine appropriate mitigation measures; development standards will require that access cannot be blocked or denied to neighboring or contiguous allotments
UTILITIES AND COMMUNITY SERVICES		
Public Water and Sewer Systems	No impacts	No mitigation required
Solid Waste Collection	Potential for 5,400 additional dwelling units will produce significant amount of solid waste	Provision for solid waste collection and disposal will be a requirement of any lease
Power	No significant impact	No mitigation required
Communications	No significant impact	No mitigation required
Emergency Services	Major impact on law enforcement, fire, and emergency medical services	Mitigation measures to ensure provision of these services will be required
Schools	Impact to Carson Valley School District	Usual mitigation through increased property taxes; additional mitigation may be required for trust lands

IMPLEMENTATION MEASURES/STRATEGIES



6 IMPLEMENTATION MEASURES/STRATEGIES

DEVELOPMENT STANDARDS

Based on the type and scale of recommended development for the Pine Nut Allotments, codified development standards and design criteria for the development of leased property were developed. The purpose of these Development Standards is to further define standards to be met for development of leased lands within the Pine Nut Allotments. They are intended as an aid in the submittal of plans for approval by providing detailed information on which to develop plans and to base a review of those plans.

The objectives of the Pine Nut Allotments Development Standards are to:

- Provide comprehensive, consistent and clear design criteria for allotment lessees, developers, and reviewing staff
- Promote site design that provides for the public health, safety, and welfare for residents and visitors alike.
- Promote sustainable development practices including considering LEED Certification for new construction
- Promote designs that will provide safe and convenient vehicular, pedestrian, and bicycle accessibility and circulation between and within developments
- Encourage sustainable and quality architectural design and building materials, which are aesthetically pleasing and provide human scale within commercial, industrial, institutional and residential developments
- Coordinate building design, signage, lighting, and landscape design to provide diversity, variety in building form and type, open spaces, and site features while maintaining a sense of design continuity throughout the site.
- Protect the scenic views and prevent unsightly developments
- Promote harmony between new and existing developments and encourage shared access and parking between adjacent compatible land uses
- Provide residential developments that promote neighborhood identity and neighborhood amenities
- Provide economic development opportunities in a well-planned, unique, and orderly manner
- Create opportunities for both tribal and non-tribal businesses to thrive

The Development Standards, which will apply to all leased lands within the Pine Nut Allotments, are intended to be used together with the applicable Douglas County Engineering Design Criteria and Improvements Standards Code (DCIS), the provisions of the International Building Code (IBC), and the International Fire Code as required. Applicable regulations are summarized in Table 6-1.

**Table 6-1
Applicable Regulations**

Authority	Nature of Action	Contact
U.S. Bureau of Indian Affairs	Approval of Lease of Pine Nut Allotments Site and Design Approval Land Use Approval	Economic Development Director or designee
Douglas County Engineering Department	Roadway Standards Driveway Permits	Douglas County Public Works Director or designee
Douglas County Building Department	Building Permits Conventional Septic System Permit	Douglas County Building Official or designee
National Historic Preservation Act Section 106	Review and approval of all ground-disturbing activity prior to construction	Tribal Historic Preservation Officer
U.S. Environmental Protection Agency	Stormwater Pollution Prevention Plan prior to construction	Regional EPA Office
State of Nevada Department of Conservation & Natural Resources-Division of Water Resources	Review and approval of potable water source Review and approval of Specialized Septic System Permit	Director of Water Resources or designee

Based on each allotment's suitability for various types of development designated in this Plan, the Development Standards outline which uses are allowed, conditional, temporary or prohibited on leased lands within the Pine Nut Allotments. These are:

Allowed Uses

- Single family residential (requires proof of adequate provisions for potable water and sewage disposal)
- Agricultural use of the land
- Home occupations including in-home daycare
- Public parks and playgrounds
- Accessory uses

Conditional Uses

- Commercial uses
- Multi-family residential use

Professional office, clinics, or services
Manufactured home park
Assisted living or group care facility
Public or municipal buildings
Utility or telecommunication facilities
Schools and educational facilities
Commercial Recreational use
Resort or overnight accommodation facilities
Industrial use and facilities
Grading for more than 500 cubic yards
Off-premises signage

Temporary Uses

Emergency non-commercial telecommunications
Temporary batch plants
Temporary construction or sales offices
Temporary dwelling units
Seasonal sales lots

Prohibited Uses

Those uses that create noise, vibration, odor, heat and glare that are discernable from the parcel line and cannot be effectively mitigated. Also, no uses which involve the disposal of hazardous materials will be allowed.

All new developments and modifications of existing developments (except regular maintenance and repair) will require one of two types of review processes – Development Review Type I or Development Review Type II – Conditional Use Permit.

Development Review Type I is a non-discretionary or “ministerial” review conducted by the BIA through an administrative review process without a public hearing. It is for less complex developments and land uses that do not have significant design review issues, and it ensures compliance with the basic development standards such as building setbacks, lot coverage, maximum building height, and similar provisions. A Development Review Type I is required for all Allowed Uses listed above.

Development Review Type II (Conditional Use Permit) is a discretionary review conducted by the BIA through an administrative process and requires public notification of adjacent property owners. At the discretion of the BIA, the review may include a third party design professional. A Development Review Type II is required for all development uses except those specifically listed under Type I development or those deemed to be prohibited uses.

Detailed Development Standards, Design Criteria, and Type I and Type II application procedures and requirements for the development of leased property in the Pine Nut Allotments are presented in Appendix G.

LEASE RECOMMENDATIONS

Under a land lease, the ground on which a proposed structure is to be built is leased to a builder/developer (Lessee) instead of being sold, meaning that the land and the structure(s) are owned independently. The most common reason for a land lease contract is that the property owner (Lessor) wants to retain ownership of the land but not take on the responsibilities for its development. That right

is contractually assigned to the builder/developer in exchange for lease payments that provide income to the owner.

The BIA has a great deal of experience in leasing Indian lands for grazing and for mineral extraction over many decades. However, leasing lands for urban develop is a more complex process and is a new experience for the BIA. This is particularly true in trying to accomplish urban development while still maintaining Indian ownership of the land over the long-term.

A combination of sources were studied in preparing the lease recommendations for the Pine Nut Allotments, including: the US Code, Title 25, Indians, as well as several examples of leases entered into by the BIA or individual Indians and/or Tribes; court cases involving disputes arising from some of those leases; municipal land leases; and best practices for private-sector commercial land leases.

Two key assumptions underlie the recommendations:

- The Pine Nut Allotments will remain in Trust status, and there will be no provisions for granting fee title to the land to any parties
- The leases are expected to return fair market value to the allotment owners over the periods of those leases

It was also assumed that:

- All developments will conform to standards written specifically for that purpose in lieu of County zoning ordinances or other regulations that do not apply on Trust lands
- Leases will be made to developers who can demonstrate capability to perform the projects for which the leases are written, including financial capability
- Provisions will be made to ensure specific performance of the accepted development proposals
- Remedies for default will protect the allotment holders to preserve the values and integrity of the land

There is no single format for writing land leases as each one has to be tailored to the specific property being leased, the uses that are proposed on it, and the unique interests of the parties entering the lease. The list below is a modified version of the Lease Provision Checklist provided by the American Society of Real Estate Counselors showing only those provisions that would normally apply to land leases.

Land Lease Provisions Checklist (American Society of Real Estate Counselors)

- | | |
|--|--|
| <p>A. Fundamental</p> <ol style="list-style-type: none">1. Name and legal address of parties2. Description of property3. Term of agreement4. Rental and method of payment | <p>C. Options</p> <ol style="list-style-type: none">1. Renewal2. Cancellation |
| <p>B. Desirable</p> <ol style="list-style-type: none">1. Use – limitations & restrictions2. Utilities3. Damages4. Indemnification5. Inspection6. Notices7. Assignment and/or subletting8. Ad valorem taxes9. Remedies for Default10. Remedies in Bankruptcy | <p>D. Special & Miscellaneous</p> <ol style="list-style-type: none">1. Inducements2. Postponement and/or holdover3. Subordination4. Security5. Escalator clauses<ol style="list-style-type: none">a. Rentsa. Taxesb. Insurance6. Percentage rents7. Arbitration8. Applicable laws |

A summary of issues of particular importance for lease provisions for the Pine Nut Allotments, their potential implications, and recommendations for their resolution follows. A more detailed description is provided in Appendix H.

Name and Legal Address of Parties (Ownership) – Many of the Pine Nut Allotments are held in multiple ownerships, due in part to deaths and inheritances, marriages, and distribution through extended families. For those allotments not held in single ownerships, there needs to be an express provision designating who can sign the lease on behalf of the other owners. It may be desirable to have the multiple owners form an LLC or other legal entity to perform this function, or have the owners agree to a limited Power of Attorney assigning the responsibility to one individual.

Term of Agreement – Recognizing that the leases need to protect the allotment holders but still provide incentives for developers, the length of term of the leases has to be long enough to enable conventional financing of projects, probably through Deeds of Trust on the leasehold interests. The current policy of 50-year leases is adequate for a first conventional mortgage of 30 years, but it becomes a serious detriment to further financing as that term approaches. Any lender will want to be assured that sufficient time remains on the lease to ensure resale of the improvements if the original owner defaults. If only 20 years remain on the ground lease, it will be impossible to place a 30-year mortgage on the owned improvements. For that reason, the BIA should consider gaining legal authority to write leases for either a period extending to 99 years or with escalating terms. For example, if an original lessee should default, desire to sell, or die during the term of the lease, then the lease might have a provision that any second owner could obtain an extension of the lease sufficient to obtain a new 30-year mortgage on the owned improvements.

Lease Renewal – The Lessor may renew a lease as it approaches termination, usually at renegotiated amounts of rent; however, that is not automatic and therein lies one of the greatest difficulties in leasing land on which other parties are expected to make capital improvements. If the lease is not renewed, the standard practice is that any improvements made on the land revert to ownership by the Lessor. Other arrangements may include removal of those improvements by the Lessee, or a fixed-sum payment from the Lessor to the Lessee in lieu of removal.

For commercial developments, this provision affects the quality of the investment in terms of the Lessee's ability to finance, refinance, or sell the capital improvements. The primary recourse of a lender if the Lessee defaults is to take back ownership of the property and find some other party to cover the debt service obligations. The closer the default is to the end of the lease period, the more difficult it becomes to find a third party willing to assume that debt or to collateralize new financing. Anyone considering buying the property will likely expect a deeply discounted price to reflect the shortened period for recovering the purchase price.

Despite this concern, commercial projects are the most likely uses for land that is leased because of two factors: (1) the income stream that can be produced by renting facilities or space to subtenants; and (2) the substantial tax advantages that can be gained from depreciating income properties as well as deducting the interest payments. The investment in the project will be analyzed for its after-tax rate of return on equity capital and the decision to go forward will be based on the outcome of that analysis.

It is a different story for residential properties, especially those that are owner-occupied such as primary or second-home developments. In addition to the psychological aversion to giving up their homes at the end of the lease period, owner-occupants do not have the advantage of depreciating their investment although they can still deduct mortgage interest. They will not have income streams from their homes unless they rent them as income properties. Instead, they are more likely to consider their principal payments as wealth-building investments and value appreciation because an internal rate of return (IRR) analysis is not applicable. If the residence reverts to the landowner at the end of the lease term, then both the accrued principal payments and the appreciation also revert to the land owner.

Lease Revenues – This is a question of how the allotment lands should be valued to ensure that the lease revenues provide market rates of return over the full period of those leases. The standard method would be to obtain a qualified appraisal to set the current market value, then apply an escalator that assures the lease revenues at least match rates of inflation over the term of the lease. That could be the consumer price index (CPI) as calculated by the US Bureau of Labor Statistics (BLS). Specific guidelines are proved by the BLS on how to use the CPI to adjust contract terms over time.

A cash flow projection based on CPI adjustments may appear to end up with a net present value equal to the original market value, which will be less than the value of proceeds from a sale that are invested at above-CPI rates. However, there is a major difference in the analysis because the leasing model includes the return of the land at the end of the lease period, at the then current market value, to the allotment holder. That adds the full value of market appreciation into the net present value of the leasing cash flows. That adds another 6% to 7% of annual returns to the leasing model.

Uses of the Property – Leases often allow for flexibility in the development of properties to adjust for changing markets and other circumstances that are unforeseen when the lease is negotiated. However, the BIA should require having a general plan for development provided by the Lessee prior to the execution of the lease as described in Chapter 4. That can be accomplished with an option to lease that gives the Lessee the right to execute the lease when certain provisions have been satisfied, such as providing an acceptable development plan and showing financial capability to complete the development within a specified time frame. It is generally much simpler to work with an expired option than with a terminated lease. Even for a single family residence, it would be desirable to have an approved site plan and building plan showing elevations with square footage, materials, landscaping, or other provisions normally included in CC&Rs. One way to address this is to create standardized requirements for how properties need to be developed, similar to a zoning ordinance, along with a set of design standards such as those developed for this plan, which can then be referenced in the lease as required performance standards.

Time and Expenditure for Improvements – This is one of the most important items in the lease, especially the specified time period for improvements, because it is frequently the most common cause of disputes and/or defaults. Language needs to be included in all leases delineating timed benchmarks that must be met to ensure continuing progress toward the final full development. Equally important is language that clearly describes the rights of the Lessor in case the Lessee fails to meet the requirements of the lease. In general, the primary objective of the default provision should be to ensure specific performance, i.e., that the Lessor actually develops the property in the manner described by the general plan as well as the specific plans and designs. A description of “Remedies for Default” needs to be included, describing each potential default and the specific actions that may be taken by the Lessee to cure the default, or by the Secretary or Lessor to claim a remedy.

Water Use and Facilities – Many of the allotments will probably be served by wells, and perhaps by already existing wells owned by the Lessor. Water is an important issue in the Pine Nut Mountains and there needs to be flexible but clear language that describes how water will be provided to each allotment, who is responsible for providing it, what uses are allowed for that water (domestic, agricultural, recreational, commercial, etc.), what limitations are imposed, and how the water use will be monitored. There also needs to be language that states any remedies for violating the terms of this water agreement. The lease should include a disclaimer that groundwater may not be available over the life of the development, and that this provision should be incorporated into all subleases in the Pine Nut Allotments.

Overall, it is important for any lease to have specific provisions for performance and remedies for defaults, to obtain the Lessor’s approval for any changes in a lease through subletting, assignments, transfers of property, or other actions, and for the Lessor to perform due diligence into the qualifications, experience, track record, and financial capabilities of the Lessee before the lease agreement is signed.

APPENDICES

APPENDIX A BIBLIOGRAPHY

A BIBLIOGRAPHY

Agenda for Pin Nut Allotment Meeting, April 12, 2006, Washoe Tribe of Nevada and California, Western Regional Office and Western Nevada Agency Office of the Bureau of Indian Affairs; Questions Re BIA Review and Approval of Leases and Environmental Reviews of Proposed Development Projects

Attorney's Letter to U.S. Department of the Interior, Interior Board of Indian Appeals, Office of Hearing and Appeals re Washoe Tribe of Nevada and California Notice of Appeal, dated January 12, 2007

Buffalo Run, Douglas County, Nevada, Environmental Assessment, ©CSCON 2006, Prepared for Buffalo Run LLC by CSCON

Decision Letter to former Washoe Tribe Chairman Brian Wallace from BIA Regional Director Allen Anspach, dated October 24, 2006, re Leasing and conveyance issues involving the Pine Nut Allotments

Deer Lodge Park, Douglas County, Nevada, Environmental Assessment, ©CSCON 2006, Prepared for Deer Lodge Park LLC by CSCON

Douglas County, Nevada Master Plan, 1996

Douglas County, Nevada Master Plan, 2006 Update, Adopted January 4, 2007

Environmental Assessment Report for Pine View Estate, December 1998, Prepared for PTP Incorporated by Lumos and Associates, Inc.

Integrated Resource Management Plan, Washoe Tribe of Nevada and California, Washoe Tribal Council, 2008

Jurisdictional Issues Pertaining to Washoe Allotments, Various Letters, Memoranda, Transcripts, Resolutions, and Codes

Pinenut Allotments, A Study in Developmental Policy Planning, July 1974, Prepared by the Murray-McCormick Environmental Group

Pine Nut Mountains Plan Area Land Use Plan Amendment and Environmental Impact Statement Administrative Draft, March 2004, U.S. Department of the Interior, Bureau of Land Management, Carson City Field Office, Carson City, Nevada

Table of Contents – Administrative Record (appeal to IBIA from Oct 24, 2006, Decision Concerning Jurisdiction over the "Pine Nut Allotments")

Washoe Tribe of Nevada and California, Interim Development Planning System, Review Process and Development Standards for Land Use Projects on Tribal Lands, Approved by Washoe Tribe Council July 21, 1995

APPENDIX B
AGENCY AND COMMUNITY
INVOLVEMENT

B AGENCY AND COMMUNITY INVOLVEMENT

Agency Consultation

BIA West Regional Office

400 N. 5th St., Two AZ Center
Phoenix, AZ 85004
602.379.6781
FAX: 602.379 6754

Stan Webb, Regional Realty Officer
Mike Johnson, COR, Realty specialist
Carolyn Bowker, At. COR, Realty Specialist
Amy Heuslein, Environmental Protection Officer
Kathy Wilson, Natural Resources Officer (Water Rights)
Paul Robinson, Contracting Officer
Gary Cantley, Archaeologist
Gloria Koehne, Leasing
Pierre Cantou, Paralegal Specialist
Tamera Dawes, Planner

New Staff Member: Tamera Dawes, Realty Specialist
--

BIA Western Nevada Agency

311 E. Washington St.
Carson City, NV 89701-4065
775.887.3570
FAX: 775.887.3531

Curtis Millsap-, Realty Office, x249
Kathy Bowen, Realty Specialist, x245
Brenda Astor, Superintendent, 775.887.3501
Dave Smith
Steve Brown
Matt Spalding, Natural Resources
George Tewanema
Karen Whitenton, Office of Special Trustee
Tom Strekal, Water Resources

Curtis retired and Kathy, Brenda and Karen transferred to other locations.
--

The current staff members are:

Athena Brown, Superintendent Dan Allen, Realty Specialist Amy Roberts, Realty Specialist Roseanna Roberts, Realty Specialist

Theresa Glinski, Office of Special Trustee
--

East Fork Fire & Paramedic Districts

Tod Carlini, District Fire Chief (Minon)
Phone: 775.782.9048
Fax: 775.782.9043
tcarlini@co.douglas.nv.us

Environmental Protection Agency

State of Nevada

Department of Natural Resources
Eric Paschal

Division of State Lands

Department of Transportation
Susan Singer, Supervisory Right-of-Way Agent, 775-888-7398

Dept. of Conservation & Natural Resources
Division of Water Resources

Division of Environmental Protection
Bureau of Water Pollution
Air Quality Bureau

Douglas County, Nevada

U.S. Fish and Wildlife
Marcy Haworth (Reno)

U. S. Geological Survey
Doug Maurer

Bureau of Land Management
Jo Hufnagle, Realty Specialist, 775.885.6144

U.S. Forest Service
Carson Ranger District
1536 S. Carson
Carson City, Nevada

Ed DiCarlo, 775.882.2766

Community Involvement

During the course of this planning effort, several public meetings were held in and around Carson City. These were:

September 24, 2008	Public Meeting, Minden, NV
September 25, 2008	Public Meeting, Carson City, NV
TBA	Public Meetings on Draft Plan

In addition, on May 13, 2008, the BIA and its consultant met with the Washoe Tribe in Carson City, NV to present information on plan development to date.

Summaries of the meetings follow.

**Washoe Tribal Meeting
May 13, 2008**

Presentation

Pine Nut Allotments (NV) Land Use and Development Plan



**Bureau of Indian Affairs
Western Regional Office**



May 13, 2008



**Mitchell Nelson Group
Elesco, Ltd.**

Presentation

Pine Nut Allotments Land Use and Development Plan

May 13, 2008

Carson City, NV

Purpose of the Project

Project Team

Cascade Design Professionals, Inc.

Mitchell Nelson Group

Elesco Ltd.

GSI Water Solutions

Project Scope

Use Designations

Site Suitability Analysis

Highest and Best Use

Impact Analysis

Standards Recommendations

Lease Recommendations

Plan Preparation

Public/Agency Involvement

Project Schedule

Public/Agency Involvement

Agency Coordination

Public Meetings

Q&A

Dennis Petrequin, Cascade Design Professionals, Inc., Project Manager: Mr. Petrequin has over 30 years of experience in land use and comprehensive planning including more than 20 years of involvement in the BIA transportation planning and roads improvement programs. His technical expertise also includes preparing environmental assessments and impact statements.

John Nelson, Mitchell Nelson Group: Mr. Nelson is a recognized leader in land use planning, with a focus on planning and design of land for new development.

Lee Smith, Elesco, Ltd.: Mr. Smith provides consulting services in community economic development, focusing on business site development and revenue enhancement strategies. His firm serves public and private sector clients throughout the western United States and Canada.

Project Purpose

A recent growth surge in Douglas County has give rise to a high demand for housing and related commercial development. Indian landowners are being approached with residential and other long-term commercial lease proposals. Leases of allotted land are typically entered into between the Indian landowner(s) and the lessee, subject to approval by BIA who is the trustee of allotted lands. However, there are contractual and environmental concerns related to the leasing process:

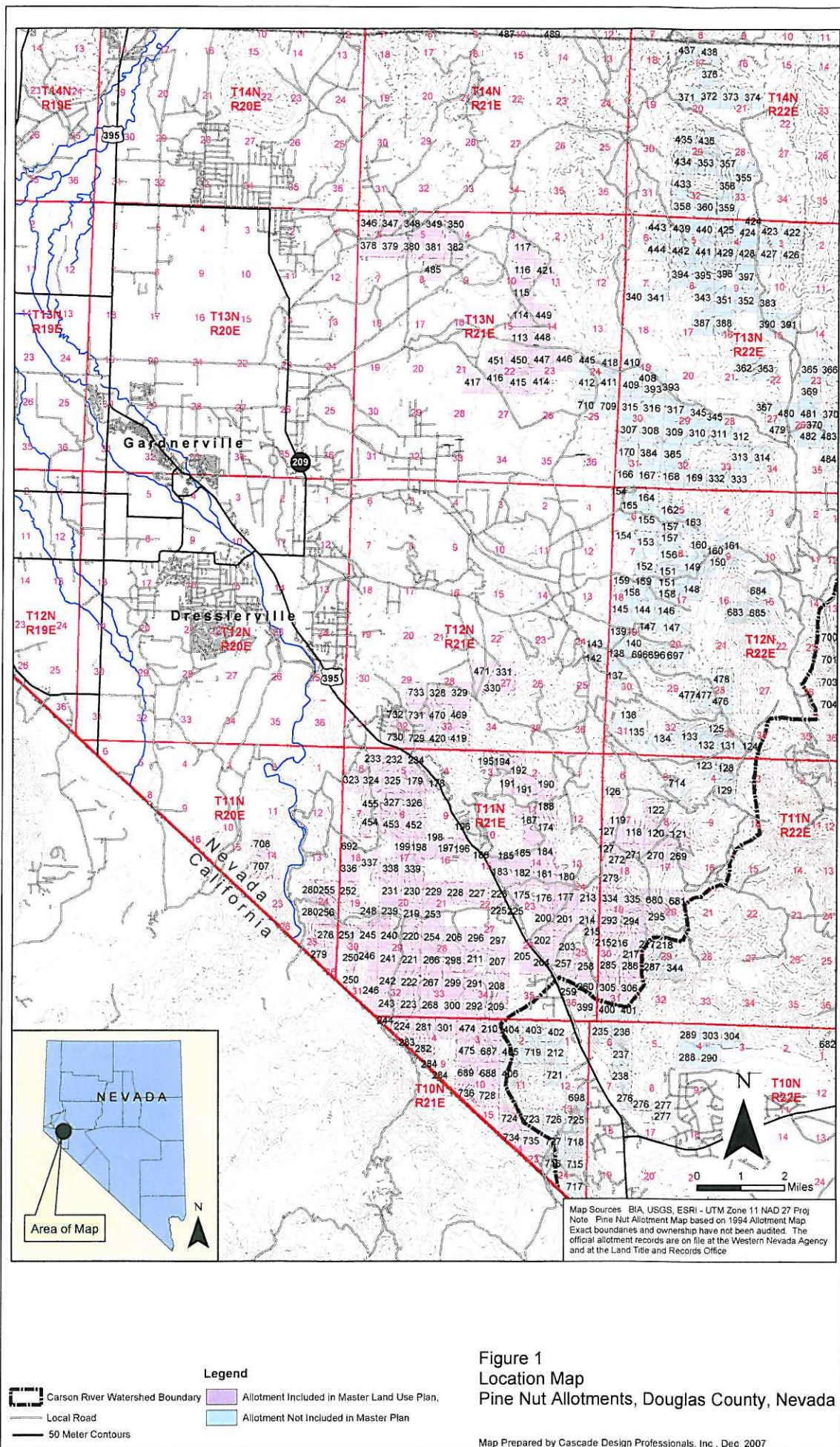
- Existing approval standards are minimal and provide little guidance for the BIA in its approval process.
- Is adequate planning being done, and are valuable natural and cultural resources adequately protected?
- Even where development to the highest and best economic use is being pursued, are the landowners' long-term best interests served?



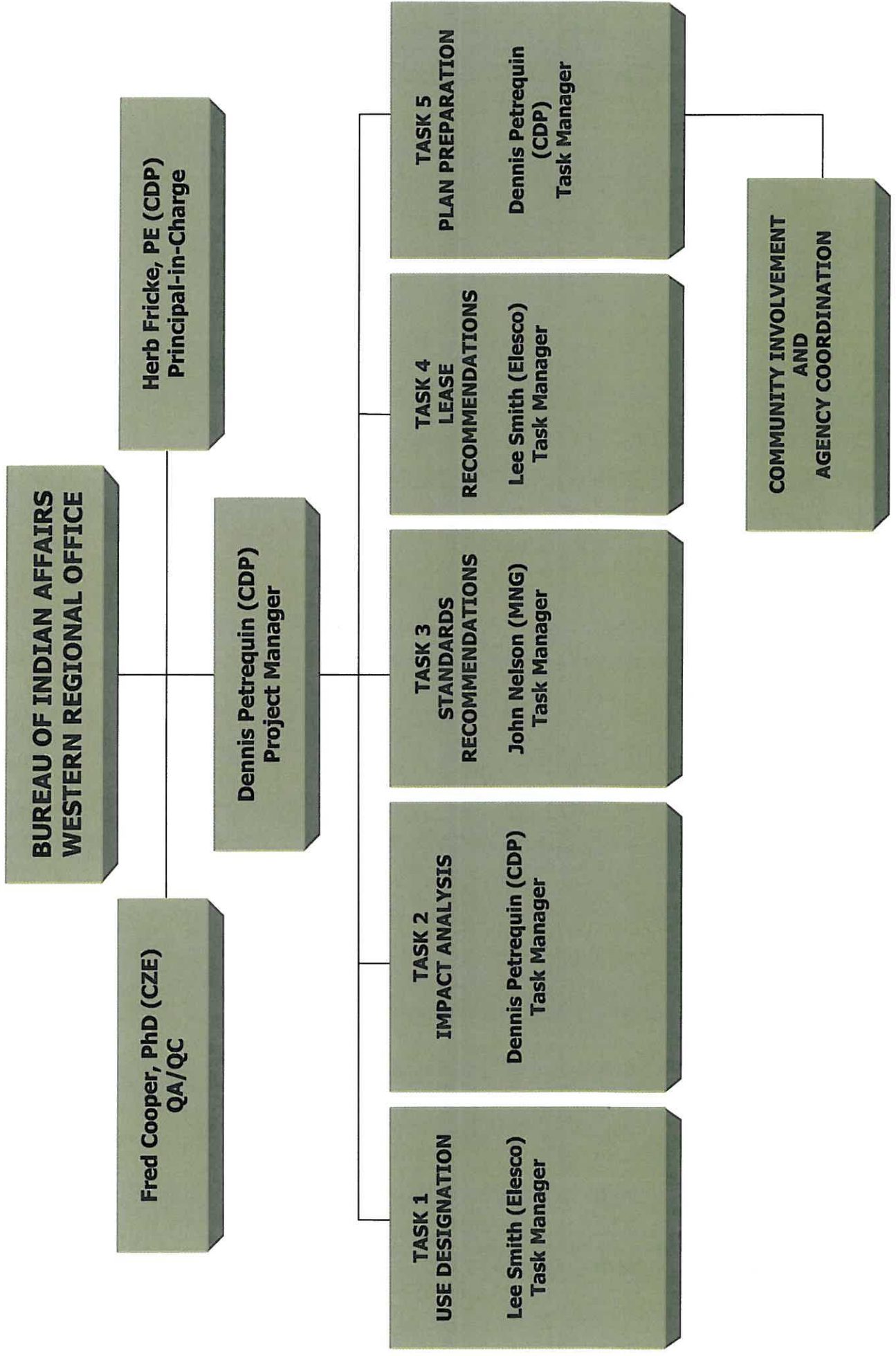
In response to these concerns, the Bureau of Indian Affairs, Western Regional Office, is preparing a Land Use and Development Plan for the Pine Nut Allotments in Douglas County, Nevada. The Plan is intended to guide decision making by the BIA in its review of commercial development proposals made by individual Indian landowners and potential lessees.

Project Team

To complete the plan, BIA contracted with Cascade Design Professionals, Inc., a Native American owned planning and engineering firm. Cascade Design and their team of planners and economists, will build the Plan in phases, beginning with Highest and Best Use determinations for the allotments, and including recommendations for contractual/regulatory mitigation measures, building and operating standards, and rental structures.



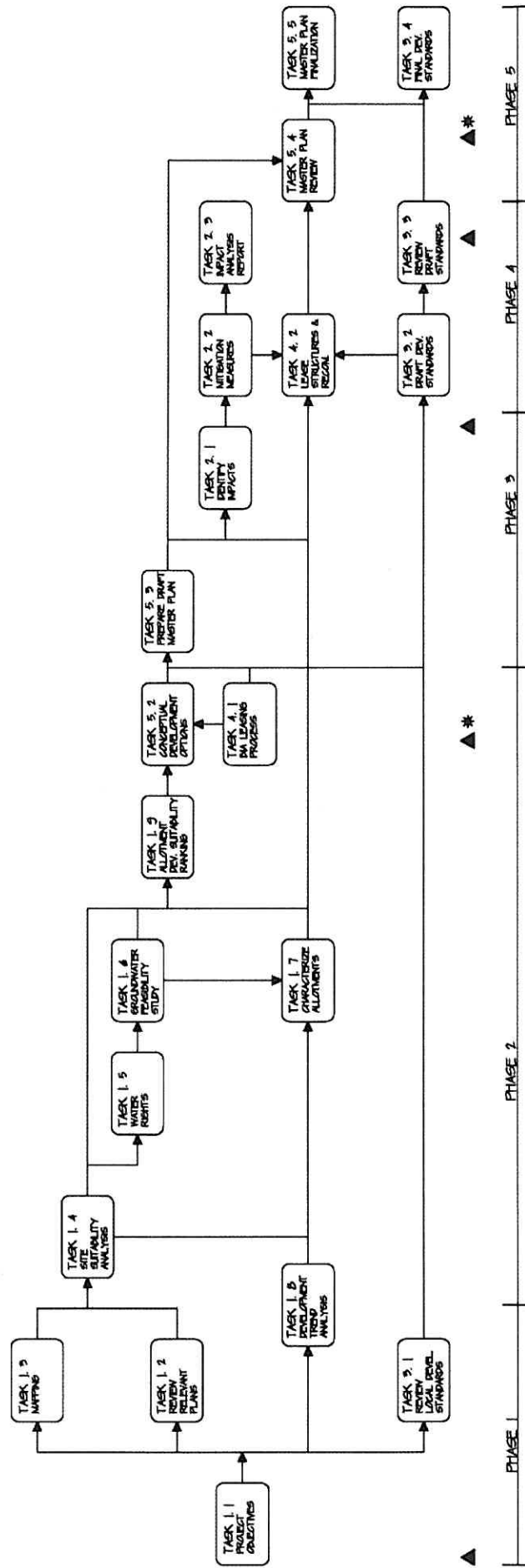
Project Team



Scope of Work

TASK	SUBTASKS	PRODUCT
1 Use Designations	1.1 Identify Project Objectives 1.2 Identify/Review Relevant Plans/Studies 1.3 Mapping 1.4 Site Suitability Analysis 1.5 Water Rights 1.6 Groundwater Feasibility Study 1.7 Characterize Allotments 1.8 Development Trend Analysis 1.9 Development Suitability Rankings	“Highest and Best Use” Designations Administrative Report Land Suitability Administrative Report Groundwater Feasibility Study Report
2 Impact Analysis	2.1 Identify impacts 2.2 Identify Mitigation measures 2.3 Impact Analysis Report	EIA Report
3 Standards Recommendations	3.1 Develop Draft Development Standards 3.2 Review Draft Development Standards 3.3 Develop Final Recommended Development Standards	Development Standards Administrative Report
4 Lease Recommendations	4.1 BIA Leasing Process & Requirements 4.2 Develop Lease Structures and Lease Recommendations	Property Lease Structure
5 Plan Preparation	5.1 Public/Agency Involvement 5.2 Conceptual Land Use and Development Options 5.3 Prepare Draft Master Land Use and Development Plan 5.4 Plan Review 5.5 Plan finalization	Master land Use and Development Plan

PINE NUT ALLOTMENTS PROJECT FLOW CHART



**Pine Nut Allotments
Land Use & Development Plan
2008**

Task	February	March	April	May	June	July	August	September	October
1.0 Use Designations									
1.1 Identify Project Objectives	completed								
1.2 Identify & Review Relevant Plans									
1.3 Mapping									
1.4 Site Suitability Analysis									
1.5 Water Rights	completed								
1.6 Groundwater Investigation	completed								
1.7 Characterize Allotments									
1.8 Development Trend Analysis	completed								
1.9 Development Suitability Ranking of Each Allotment									
2.0 Impact Analysis									
2.1 Identify Impacts									
2.2 Identify Mitigation Measures									
2.3 Impact Analysis Report									
3 Standards Recommendations									
3.1 Review Local Development Codes/Standards									
3.2 Develop Draft Development Standards									
3.3 Review Draft Development Standards									
3.4 Final Recommended Development Standards									
4 Lease Recommendations									
4.1 BIA Leasing Process & Requirements									
4.2 Develop Lease Structures & Recommendations									
5 Plan Preparation									
5.1 Public/Agency Involvement									
5.2 Conceptual Land Use & Development Options									
5.3 Prepare Draft Master Plan									
5.4 Master Plan Review									
5.5 Master Plan Finalization									

Prepared by Cascade Design Professionals, Inc.

Public Meeting

BIA/Agencies Meeting

Cascade Design Professionals, Inc.

A 100% Native American owned business located in the Portland area offering engineering, planning, construction, and project management services.

Our Services

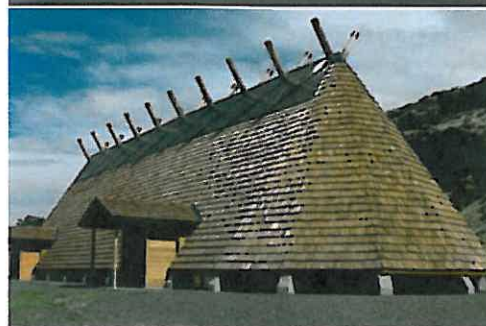
- Land Use Planning
- Site Planning and Design
- Water/Wastewater Facilities Planning and Design
- Transportation Planning
- Environmental Analyses
- Stormwater Management
- Street and Highway Design
- Structural Design/Seismic Analysis
- Capital Improvements Programming

Our Staff

- 5 Civil, Structural and Environmental Engineers
- 2 Planners
- 4 Technicians
- 2 Administrator

Our Clients

- Indian Nations and Tribes
- State and Federal Agencies
- Municipalities
- Private Developers
- Other A/E and Construction Firms





MITCHELL NELSON GROUP, LLC

*Land Use & Community Planning
Feasibility Analysis
Project Management
Development Strategies*

For over 30 years, "Mitchell Nelson" has provided services aimed at developing healthy communities. This objective is accomplished through land use planning, design, economics and the continuous involvement of market analysis. We have gained an excellent reputation for developing creative solutions to complex challenges. Our methods rely on relationships of trust and consensus, and our accomplishments are built on a foundation of economic feasibility.

Professionals trained and experienced in land use planning, development analysis, real estate economics, and community involvement provide our services. Each individual is effective at managing projects or working collaboratively with other design professionals. Our projects have won numerous design awards; our work for private developments has proven to be financially successful; and the results of our work have gained community support and acceptance.



*Master Land Planning
Site Design & Detailing
Streetscape & Parking*

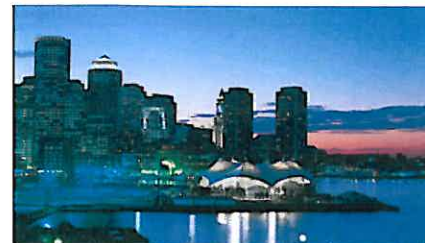
*Open Space Planning
Operations & Management Plans
Protective Covenants*

*Real Estate Economics
Development Feasibility
Design/Development
Strategies
Land Use Analysis
Land Use Planning
Design Guidelines*

Mitchell Nelson Group has a diverse clientele from both the public and private sectors. We have established ourselves with the development community, public agencies, Native American tribes, and educational and religious institutions. Many of our clients include not-for-profit institutions and Northwest Tribes, such as Albertina Kerr Foundation, Trillium Family Services, Confederated Tribes of Warm Springs, and Coquille Tribe. We enjoy long-term relationships with many of our clients and provide on-going services through all phases of development.

*Mount Angel Abbey, OR
Port of Astoria, OR
Port of Chelan County, WA
Sacramento Valley Amphitheater
Coquille Indian Tribe, OR
Warm Springs Tribes of OR
Port of Vancouver, USA
Klamath Falls Airport, OR
WA
State Farm Insurance*

*City of Pocatello, ID
Port of Portland
Port of Hood River, OR
State of Oregon - DAS
Muckleshoot Tribe, WA
Spokane Airport, WA
Standard Insurance Co.
Port of Sunnyside,
State of Oregon - ODOT*



Elesco, Ltd.



Elesco Ltd., of Bend, Oregon, is a marketing and economic research firm with a long history of working successfully with Indian Tribes in the western United States. The firm is owned and operated by Mr. Lee Smith. Several of our recent projects have been as part of a team with the Mitchell Nelson Group LLC and/or with Cascade Design Professionals, Inc.

Elesco has provided real estate and economic development consulting services to more than 100 clients in six western states and two Canadian provinces. Its range of services now includes:

- Land capability and needs analysis
- Project feasibility and market analysis
- Financial analysis and structuring
- Real estate repositioning strategies
- Competitive analysis and target marketing strategies
- Economic analysis for land use planning decisions
- Economic development and diversification strategies
- Industrial and commercial site development strategies

What sets Elesco apart from other consulting firms is our working experience in both economic development and commercial/industrial real estate development and marketing. This enables us to apply real-world analysis and strategies to projects, rather than simply using theoretical models.

ORGANIZATION AND STRUCTURE

Elesco is a small, efficient and highly streamlined company that relies on teamwork and strategic alliances to provide its full range of professional services. Under the direction of Lee Smith, its president and principal consultant, Elesco assesses the requirements of each individual project and puts together a team of qualified professionals in their respective disciplines. Elesco also joins team headed by other professional firms.

For the Pine Nut project, Lee Smith personally will provide the required market and economic services. His qualifications are listed in this Statement of Qualifications.

HISTORY OF WORKING WITH INDIAN TRIBES

- **Confederated Tribes of Coos • Lower Umpqua • Siuslaw Indians** – Market and economic analysis for a commercial property in Coos Bay in support of a “highest and best use” analysis
- **Tohono O’odham Tribe** – Development of a business park and Foreign Trade Zone
- **Coquille Indian Tribe** – Market and economic analysis for 900 acres of clear-cut
- **Confederated Tribes of Warm Springs** – Market and economic analysis for a new industrial park
- **Colville Indian Tribes** – Market and economic analysis for the industrial site master plan
- **Coeur d’Alene Tribe** – Economic feasibility analysis of developing a Tribal Interpretive Center and other facilities at Plummer, Idaho
- **Confederated Tribes of the Umatilla Indian Reservation** - Market and economic analysis in for a master land development plan



Dennis Petrequin

Project Manager

Task Manager – Task 2 Impact Analysis; Task 5 Plan Preparation

Education Bachelor of Architecture, University of Oregon
Master of Urban Planning, University of Oregon

Affiliations Grand Ronde Economic Development Corporation, 1989-1992
City of Sandy Design Review Board, 1979-1989
Campus Planning Committee, University of Oregon, 1970-1971

Professional Experience

Mr. Petrequin has over 30 years of experience in land use and comprehensive planning in the Pacific Northwest. He has been involved site planning for industrial, commercial, and housing developments. He also is experienced in infrastructure planning and design, and also was an appointed member of the City of Sandy Design Review Board for 10 years where he reviewed development plans and signage. Some of Mr. Petrequin's technical expertise includes: preparation of grant applications (CBG and ANA grants), site planning; transportation planning and traffic calming; capital improvement programs for utilities, roads, and public facilities; water, sewer, and drainage facilities; developing and implementing public involvement programs; preparing environmental assessments and impact statements; and demographic analysis and population projections.

Land Use and Development Planning

- Warm Springs Downtown Development Plan, Warm Springs Community, Confederated Tribes of the Warm Springs Reservation, Oregon
- Site Design, Kah-Nee-Ta Gaming Facility, Confederated Tribes of the Warm Springs Reservation, Oregon
- Commercial Land Use Development Plan, Warm Springs Community, Confederated Tribes of the Warm Springs Reservation, Oregon
- Homelands Master Plan, Confederated Tribes of the Grand Ronde Community of Oregon
- Site Design, Celilo Village, US Army Corps of Engineers, Portland, Oregon
- Land Use and Development Plan, Mooretown Rancheria, Oroville, California
- Site Development Plan, Port of Longview, Washington
- Site Planning/Buildings Analysis, City-Wide Maintenance Facilities, Bureau of Facilities Management, Portland, Oregon
- Land Use Plan, Mooretown Rancheria, Oroville, California
- Grand Ronde Reservation Plan, Confederated Tribes of the Grand Ronde Community of Oregon
- Comprehensive Plan for Wallowa County, Oregon
- Comprehensive Plan for Union County, Oregon
- Land Use Plan for Wallowa Lake Basin, Oregon
- Comprehensive Plans, Cities of Seaside, Sandy, Veneta, and Canby, Oregon

Environmental Analyses, Assessments, and Impact Statements

- Environmental Checklist, Fee to Trust, Sauk-Suiattle Indian Tribe, Darrington, Washington
- Environmental Checklist, Chief Leschi Schools, Puyallup Indian Nation, Tacoma, Washington
- Environmental Checklist, Improvement to Old Olympic Highway, Squaxin Island Tribe, Shelton, Washington
- Environmental Assessment, Fallon Youth Center, Fallon Indian Reservation, Nevada, Bureau of Indian Affairs
- Environmental Assessment, Juvenile Detention Facility, Chinle, Arizona, Bureau of Indian Affairs
- Environmental Assessment, Juvenile Detention Facility, Tuba City, Arizona, Bureau of Indian Affairs
- Environmental Assessment, Olney Dam Improvements, Yakama Indian Nation, White Swan, Washington
- Environmental Assessment, Fee to Trust, Elk Valley Rancheria, Crescent City California
- Environmental Assessment, Highway Reconstruction, Arizona Department of Transportation, Tusayan, Arizona
- Environmental Impact Statement, Farmington Road Improvements, Oregon Department of Transportation

- Environmental Assessment, U.S. 97 Improvement, Oregon Department of Transportation, Redmond, Oregon
- Environmental Assessment, Tetlin Road Corridor Study, Bureau of Indian Affairs, Tetlin, Alaska
- Environmental Impact Statement, Sandy/Burnside Intersection, City of Portland, Oregon

Transportation Planning

- Transportation Planning, Salt River-Pima Maricopa Reservation, Scottsdale, Arizona
- Transportation Improvement Program (TIP) and Pavement Management System (PMS), Gila River Indian Reservation, Sacaton, Arizona
- SR 229 Corridor Study, Confederated Tribes of Siletz Indians, Siletz, Oregon
- Access Road Design, Kah-Nee-Ta Gaming Facility, Confederated Tribes of the Warm Springs Reservation, Warm Springs, Oregon
- Preliminary Engineering Report, Improvement to Old Olympic Highway, Squaxin Island Tribe, Shelton, Washington
- Transportation Planning, Warm Springs Community, Confederated Tribes of the Warm Springs Reservation, Oregon
- Transportation Plans for 38 Indian Reservations in Oregon, Washington, Idaho, Alaska, and Montana, Bureau of Indian Affairs, Northwest Regional Office
- Transportation Plans for 108 Indian Reservations/Rancherias/Colonies in California; Bureau of Indian Affairs, Pacific Regional Office

Capital Improvements Programs

- Capital Improvements Program, Confederated Tribes of the Warm Springs Reservation, Oregon
- Capital Improvements Program, City of Fairview, Oregon
- Transportation Improvement Program (TIP), Grand Ronde Reservation, Grand Ronde, Oregon
- Transportation Improvement Program (TIP), Burns Paiute Reservation, Burns, Oregon
- Transportation Improvement Program (TIP), The Klamath Tribes, Chiloquin, Oregon

Special Studies

- Reservation Relocation Contingency and Land Acquisition Program, Sauk-Suiattle Indian Tribe, Darrington, Washington
- Tribal Needs Assessment, Coquille Tribe, Oregon
- Tribal Needs Assessment, Klamath Tribe, Oregon



**MITCHELL
NELSON**



John A. Nelson, FASLA

Founder and Principal, Mitchell Nelson Group, LLC

Task Manager – Task 3 “Standards” Recommendations

JOHN NELSON is a recognized leader in the creative design and intelligent planning of urban land. As the founder and principal of Mitchell Nelson Group, LLC, John has integrated award winning core services - land use planning and landscape architecture – with a larger role in Project Management and Development Services. The firm is thus able to provide a high level of service value to its clients throughout the life cycle of a development project.

A recognized leader in his profession, John has focused his 30-year career on the planning and design of land for new development, renovation of existing sites, and for the management of landscape resources. John and his firm apply their creative and analytical skills throughout the Pacific Northwest for private landowners, non-profit institutions, corporate investors, public agencies, and Tribal governments.

John has directed the firm through several Native American projects over his 30 year career. The *Warm Springs Downtown Development Plan*, *Kah-nee-ta Lodge* at Warm Springs, the *Tulalip Motor Sports Facility Feasibility Analysis*, the *Coquille Golf Course Feasibility Analysis*, and the *Coquille Master Development Plan* are examples of John’s experience with Tribal development projects. Working with the Coquille Tribe and its economic development organization, John guided the projects through public involvement and jurisdictional issues to produce a comprehensive 1,000-acre Master Development Plan to include residential uses, a golf course, business park, & RV park. These projects involved federal and other funding opportunities. John has also been the key consultant for tribal master plans including the *Omak Industrial Park Master Plan*.

One of John's guiding principles in leading Mitchell Nelson Group is to plan for the highest and best use of the land within the context of environmental, cultural, historical, economical and aesthetic criteria specific to the site and surrounding community. Successful projects and long term relationships result from his comprehensive approach to every project. The *Inn at Otter Crest*, *Portland International Raceway*, the *Children's Farm Home*, and the *National Sanctuary of Our Sorrowful Mother* represent open space and site planning and landscape design for long term clients.

EDUCATION

BLA (Honors),
University of Oregon
1970

MS Urban Design and
Regional Planning,
University of
Edinburgh, Great
Britain 1973

REGISTRATION

Landscape Architect
Oregon No. 72
Washington No. 275

AFFILIATIONS

Fellow, *American
Society of Landscape
Architects*

Member, *Washington
Public Ports
Association*

Member, *Oregon
Airport Managers
Association*

EXPERIENCE WITH INDIAN TRIBES

- *Downtown Development Plan* to be completed 2005 for the Confederated Tribes of the Warm Springs Reservation of Oregon. References: Tom Henderson, CEO WS Ventures (thenderson@wsribes.org) and Ray Rangila, CTWSRO Planner (rrangila@wsribes.org)



- **North Parcel Master Plan**; Golf Course Feasibility; RV-Park Feasibility; Business Park Feasibility; Waterfront Redevelopment Plan, Phase 1 completed 1999 -2001 for the Coquille Indian Tribe and Coquille Economic Development Corporation. Reference: Brady Scott, CEO, CEDCO (bscott@themillcasino.com)
- **Omak Industrial Park Master Plan** completed 2004 for the Confederated Tribes of the Colville Reservation. Reference: Kyle Desautel, Planner (kyle.desautel@colvilletribes.com)
- **Industrial Assessment and Master Plan** completed 2001- 2002 for the Confederated Tribes of the Warm Springs Reservation of Oregon. References: Tom Henderson, CEO WS Ventures (thenderson@wstribes.org) and Ray Rangila, CTWSRO Planner (rrangila@wstribes.org)
- **White River Amphitheater** completed 2003, Muckleshoot Indian Tribe and Clear Channel Communications. Reference: Craig Mandenberg (cmandenberg@clearchannel.com)

OTHER RELEVANT EXPERIENCE

- **Ambiance Mixed Use Development** – Retail/commercial, residential, conference center, open space; Camas, WA
- **Two Creeks** – Residential development, open space and trail system; Camas, WA
- **Progress Quarry** - 800 housing units, 17ac. retail, and 20 ac. open; Beaverton, OR
- **Lake Harbor Village** – Residential; Boise, ID
- **Crosswater Golf Course & Clubhouse**, Design Team Member – Recreation, residential; Bend, OR
- **North Capitol Mall Redevelopment**, Office/commercial lots, creek-side trail and open space; Dept. of Administrative Services, State of Oregon
- **Astoria Waterfront Master Site Plan** – Retail/commercial, hospitality, live/work lofts, open space and trail system; Port of Astoria, OR
- **Westfield Mixed Use Development** – Retail, residential, open space; Lake Oswego, OR
- **St. John Vianney Retirement Complex** – Master plan, site plan, landscape design; Beaverton, OR
- **Amber Glen Site Development and Pedestrian Trail System** – 217 ac., office/commercial, open space and trail system; Hillsboro, OR
- **Hoyt Street Yards** – Redevelopment of Portland's rail yard, now known as the "River District", residential, retail/commercial, streetscape, transportation planning; Portland, OR





Leland (Lee) Smith

Task Manager – Task 1 Use Designation, Task 4 Lease Recommendations

Leland (Lee) Smith is president of Elesco, Ltd., headquartered in Bend, Oregon. Elesco provides consulting services in community economic development, focusing on business site development and revenue enhancement strategies. His firm serves public and private sector clients throughout the western United States and Canada.

Elesco Limited is currently managing the development and marketing of the 327-acre La Pine Industrial Park in southern Deschutes County, Oregon. His firm has helped develop industrial and business parks in Pocatello, Idaho; Klamath Falls, Oregon; Omak, Washington; and numerous other Northwest communities.

Mr. Smith has a B.A. degree in economics from the University of Oregon and an M.A. in economics from Portland State University. He has taught economics and economic geography at the University of Washington, the University of Arizona, and the University of Colorado at Colorado Springs.

Mr. Smith was formerly senior vice president and National Accounts Marketing Director for the Grubb & Ellis Company based in San Francisco, where he managed real estate advisory services to Fortune 500 companies.

His 20 years of economic development experience include serving as executive director of the Economic Development Council of Puget Sound (Seattle), director of the Tucson Economic Development Corporation, and director of the Colorado Springs Economic Development Council. He also held positions in community and economic development with the Pacific Power & Light Company, the Port of Portland, and the Portland Chamber of Commerce.

Professional recognition includes designation as a Master Professional Associate by the International Development Research Council (IDRC), the premier organization of corporate real estate and site location executives. He is a former executive group member of the Urban Land Institute, and has been recognized as a Certified Industrial Developer by the American Economic Development Council. He is a past president of the Pacific Northwest Economic Development Council.

Mr. Smith serves on the Board of Trustees of the Berkshire Focus Fund, a \$20 million mutual fund based in San Jose, California. He was a nine-year member of the Deschutes County Budget Committee, overseeing a \$230 million annual budget, and is a director and past president of the Deschutes County Fair Board which manages a \$31 million Fair and Expo Center. He also serves on the Board of Directors of Midstate Electric Cooperative, with 18,000 meters in four counties in Central Oregon and annual revenues in excess of \$22 million.

Presentation

Land Use and Development Plan Pine Nut Allotments (NV)

Bureau of Indian Affairs, Western Regional Office



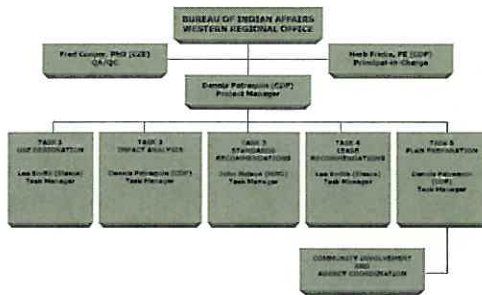
Purpose of the Project

Develop a Plan to guide decision making by the BIA in its review of commercial development proposals made by Individual Indian landowners and potential lessees

- Identify "highest and best use" for the allotments considering economic, environmental, and cultural impacts
- Recommend contractual/regulatory mitigation measures
- Recommend building and operating standards
- Recommend rental structures



Project Team



Scope of Work

TASK

- 1 Use Designations
- 2 Impact Analysis
- 3 Standards Recommendations
- 4 Lease Recommendations
- 5 Plan Preparation

Task 1 Use Designations

- 1.1 Identify Project Objectives
- 1.2 Identify/Review Relevant Plans/Studies
- 1.3 Mapping
- 1.4 Site Suitability Analysis
- 1.5 Water Rights
- 1.6 Groundwater Feasibility Study
- 1.7 Characterize Allotments
- 1.8 Development Trend Analysis
- 1.9 Development Suitability Rankings

Allotment	Water	Soil	Topography	Vegetation	Culture	History	Other	Overall
1	High	Medium	Low	High	Medium	Low	Medium	Medium
2	Medium	High	Medium	Medium	High	Medium	Low	High
3	Low	Low	High	Low	Low	High	Medium	Low
4	Medium	Medium	Medium	Medium	Medium	Medium	Medium	Medium
5	High	Medium	Medium	High	Medium	Low	Medium	High
6	Medium	High	Low	Medium	High	Medium	Low	Medium
7	Low	Low	High	Low	Low	High	Medium	Low
8	Medium	Medium	Medium	Medium	Medium	Medium	Medium	Medium
9	High	Medium	Medium	High	Medium	Low	Medium	High
10	Medium	High	Low	Medium	High	Medium	Low	Medium

Product "Highest and Best Use" Designations

Task 2 Impact Analysis

- 2.1 Identify Impacts
- 2.2 Identify Mitigation Measures
- 2.3 Impact Analysis Report

Product EIA Report



Task 3 Standards Recommendations

- 3.1 Develop Draft Development Standards
- 3.2 Review Draft Development Standards
- 2.3 Develop Final Recommended Development Standards

Product Development Standards
Administrative Report



Task 4 Lease Recommendations

- 4.1 BIA Leasing Process and Requirements
- 4.2 Develop Lease Structures and Lease Recommendations

Product Property Lease Structure



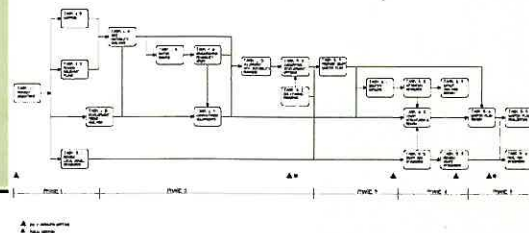
Task 5 Plan Preparation

- 5.1 Public/Agency Involvement
- 5.2 Conceptual Land Use and Development Options
- 5.3 Prepare Draft Master Land Use and Development Plan
- 5.4 Plan Review
- 5.5 Plan Finalization

Product Master Land Use and
Development Plan



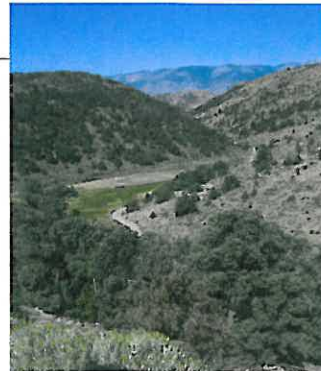
Project Flow Chart



Project Schedule

Task	February	March	April	May	June	July	August	September	October
1.0 Project Initiation									
2.0 Project Management									
3.0 Planning									
4.0 Design									
5.0 Construction									
6.0 Operation & Maintenance									
7.0 Decommissioning									
8.0 Project Closeout									
9.0 Project Evaluation									
10.0 Project Reporting									
11.0 Project Archiving									
12.0 Project Review									
13.0 Project Summary									
14.0 Project Final Report									
15.0 Project Closeout									
16.0 Project Evaluation									
17.0 Project Reporting									
18.0 Project Archiving									
19.0 Project Review									
20.0 Project Summary									
21.0 Project Final Report									
22.0 Project Closeout									
23.0 Project Evaluation									
24.0 Project Reporting									
25.0 Project Archiving									
26.0 Project Review									
27.0 Project Summary									
28.0 Project Final Report									
29.0 Project Closeout									
30.0 Project Evaluation									

Q & A



**Public Meeting
Minden, NV
September 24, 2008**

Pine Nut Allotments (NV) Land Use and Development Plan

Public Meeting

Carson Valley Inn, Minden, NV

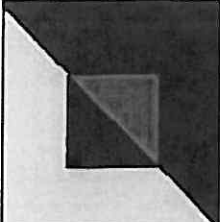
September 24, 2008, 7:00 – 9:00 p.m.

Attendees: **Consultant Team:** Dennis Petrequin, Lee Smith, John Nelson, Mary Bedard, and Jeff Barry.

BIA: Athena Brown, Stan Webb, Mike Johnson, Dave Smith, Carolyn Bowker, Amy Hueslein, Gary Cantley, Karen Whitenton, Paula Hunsberger, Rosanna Roberts, Joann Thomas, and Amy Roberts. One hundred twenty-six signed-in as community members. (See attached list.) It should be noted that not all in attendance signed-in as there were more than 150 people in the audience.

1. After expanding the room to accommodate the large crowd, Athena Brown, Superintendent of the BIA Western Nevada Agency, opened the meeting with a welcome to the community and introduced Stan Webb, Regional Realty Officer, BIA Western Regional Office.
2. Stan did a brief overview of the need for the project and the process to date. He fielded a few questions regarding hiring the consultants.
3. Mike Johnson, the COR and Realty Specialist from the BIA Western Regional Office, explained the local involvement with the project and the meeting structure. He introduced the other BIA personnel and their roles in the meeting. He fielded several questions regarding individual allotments and the status of local conditions and projects. Some expressed concerns over trespassing issues and the lack of resources for enforcement. Also, questions were raised as to access to lands.
4. Dave Smith, BIA Western Nevada Agency, presented the results of the recently completed Vegetation Report and its implications for future grazing permits. He urged community members to return the permit form, when received, with their choice of allowing or disallowing grazing leases on their land.
5. Lee Smith, economist with the consultant team, presented his findings from the market assessment and trend analysis. He reassured the audience that although housing development is currently in a slump, it will go up again and that this project will provide guidance for those future developments.
6. Mary Bedard, a community involvement specialist with the consultant team, narrated a slide presentation highlighting the consultants' work. The physical characteristics of the allotments, combined with the market assessment, resulted in the "highest and best" uses of each allotment. Attendees were urged to view the wall graphics and ask questions of individual consultants in the open house breakout that followed.
7. BIA personnel were available at one table to provide allotment owners with their allotment numbers, if needed. Another table provided Office of the Special Trustee information on the status of the allotments. One table provided printouts of the individual allotment summaries of development suitability from the consultants' report. Jeff Barry, a hydro-geologist with the consultant team, was available at a table to talk about water availability on individual allotments.
8. Numerous allotment owners reviewed the graphic presentation and discussed their allotment(s) with members of the consultant team.
9. The open house ran well past the allotted time, and some attendees planned to be at the following evening's presentation to get additional information.

D

 <p>Bureau of Indian Affairs Western Regional Office Pine Nut Allotments Land Use and Development Plan</p> <p>Comments</p>	PUBLIC MEETING
	SEPTEMBER 24-25, 2008

Is your allotment included in this study? ☒ Yes ☐ No

If yes, what group is it in? ☐ Northern ☐ Northeast ☒ Hwy 395

What is your allotment number? 202, 203, 207, 227, 241, 242

Do you or any fellow owners of your allotment have any future plans for leasing all or part of your allotment for residential, commercial, or industrial uses?

☒ Yes

If yes, what type? _____

☐ No

How important is it to establish development standards through the BIA leasing process to protect your allotment from development on a neighboring allotment?

☐ Very Important ☒ Somewhat Important ☐ Not Important

What type of development is on your allotment?

☐ 1 home (for allotment owner)

☐ 2 or more homes (for allotment owners)

☐ Residential Subdivision

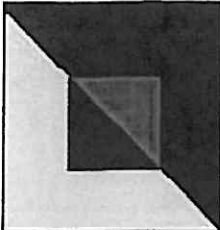
☐ Commercial

☐ Light Industrial

☐ Undeveloped

☒ Other Just Grazing

Any other comments?

	Bureau of Indian Affairs Western Regional Office Pine Nut Allotments Land Use and Development Plan	PUBLIC MEETING
	<h1>Comments</h1>	SEPTEMBER 24-25, 2008

Is your allotment included in this study? ☒ Yes ☐ No

If yes, what group is it in? ☐ Northern ☐ Northeast ☒ Hwy 395

What is your allotment number? 196-197

Do you or any fellow owners of your allotment have any future plans for leasing all or part of your allotment for residential, commercial, or industrial uses?

☐ Yes

If yes, what type? unknown

☐ No

How important is it to establish development standards through the BIA leasing process to protect your allotment from development on a neighboring allotment?

☒ Very Important ☐ Somewhat Important ☐ Not Important

What type of development is on your allotment?

☐ 1 home (for allotment owner)

☒ 2 or more homes (for allotment owners)

☐ Residential Subdivision

☐ Commercial

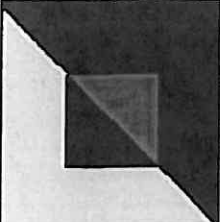
☐ Light Industrial

☐ Undeveloped

☐ Other _____

Any other comments?

I don't think its a good idea
maybe for grazing only
Hwy 395 is overwhelmed with traffic
now to the point of noise, traffic
accidents, air pollution, off road intruders
on tribal land.

 <p>Bureau of Indian Affairs Western Regional Office Pine Nut Allotments Land Use and Development Plan</p> <p>Comments</p>	PUBLIC MEETING
	SEPTEMBER 24-25, 2008

Is your allotment included in this study? ☒ Yes ☐ No

If yes, what group is it in? ☐ Northern ☐ Northeast ☐ Hwy 395

What is your allotment number? 194, 195, 196

Do you or any fellow owners of your allotment have any future plans for leasing all or part of your allotment for residential, commercial, or industrial uses?

☐ Yes

If yes, what type? _____

☒ No

How important is it to establish development standards through the BIA leasing process to protect your allotment from development on a neighboring allotment?

☒ Very Important ☐ Somewhat Important ☐ Not Important

What type of development is on your allotment?

☐ 1 home (for allotment owner)

☐ 2 or more homes (for allotment owners)

☐ Residential Subdivision

☐ Commercial

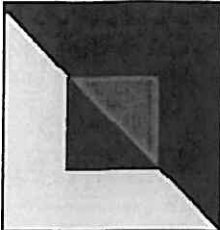
☐ Light Industrial

☒ Undeveloped

☐ Other _____

Any other comments?

- I think my family would like to use the land for (for our family) homesites if we can agree on who, what & where.
- My family says Bentley authorized/hired Mexicans to pick pinonuts (for commercial sale) from their tract but how do they know where Bentley's property ends & someone else's begins? Also 4-wheelers ride out there with no one to stop them - also chopping wood.
- I would not be opposed to commercial development

 <p>Bureau of Indian Affairs Western Regional Office Pine Nut Allotments Land Use and Development Plan</p> <p>Comments</p>	PUBLIC MEETING
	SEPTEMBER 24-25 , 2008

Is your allotment included in this study? ☒ Yes ☐ No

If yes, what group is it in? ☐ Northern ☐ Northeast ☒ Hwy 395

What is your allotment number? _____

Do you or any fellow owners of your allotment have any future plans for leasing all or part of your allotment for residential, commercial, or industrial uses?

☐ Yes

If yes, what type? _____

☐ No

How important is it to establish development standards through the BIA leasing process to protect your allotment from development on a neighboring allotment?

☒ Very Important ☐ Somewhat Important ☐ Not Important

What type of development is on your allotment?

☐ 1 home (for allotment owner)

☐ 2 or more homes (for allotment owners)

☐ Residential Subdivision

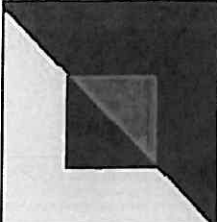
☐ Commercial

☐ Light Industrial

☐ Undeveloped

☐ Other _____

Any other comments?

 <p>Bureau of Indian Affairs Western Regional Office Pine Nut Allotments Land Use and Development Plan</p> <p>Comments</p>	PUBLIC MEETING
	SEPTEMBER 24-25, 2008

Is your allotment included in this study? ☒ Yes ☐ No

If yes, what group is it in? ☐ Northern ☐ Northeast ☒ Hwy 395

What is your allotment number? 184

Do you or any fellow owners of your allotment have any future plans for leasing all or part of your allotment for residential, commercial, or industrial uses?

☒ Yes

If yes, what type? NONE
Barabank

☒ No

How important is it to establish development standards through the BIA leasing process to protect your allotment from development on a neighboring allotment?

☐ Very Important ☐ Somewhat Important ☒ Not Important

What type of development is on your allotment?

☐ 1 home (for allotment owner)

☐ 2 or more homes (for allotment owners)

☐ Residential Subdivision

☐ Commercial

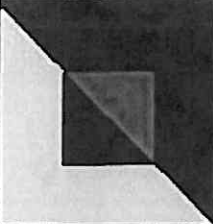
☐ Light Industrial

☐ Undeveloped

☒ Other NONE

Any other comments?

Lease my parcel alone!!
Wine is the cultural studies for the study??
Edmund Janner

	Bureau of Indian Affairs Western Regional Office Pine Nut Allotments Land Use and Development Plan	PUBLIC MEETING
	<h1>Comments</h1>	SEPTEMBER 24-25, 2008

Is your allotment included in this study? ☒ Yes ☐ No

If yes, what group is it in? ☐ Northern ☐ Northeast ☒ Hwy 395

What is your allotment number? 237

Do you or any fellow owners of your allotment have any future plans for leasing all or part of your allotment for residential, commercial, or industrial uses?

☐ Yes

If yes, what type? _____

☒ No

How important is it to establish development standards through the BIA leasing process to protect your allotment from development on a neighboring allotment?

☒ Very Important ☐ Somewhat Important ☐ Not Important

What type of development is on your allotment?

☐ 1 home (for allotment owner)

☐ 2 or more homes (for allotment owners)

☐ Residential Subdivision

☐ Commercial

☐ Light Industrial

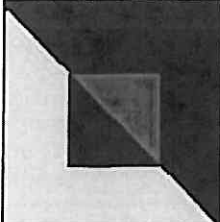
☐ Undeveloped

☐ Other NONE

Any other comments?

Leave allotments alone!!

Steven James

 <p>Bureau of Indian Affairs Western Regional Office Pine Nut Allotments Land Use and Development Plan</p> <p>Comments</p>	PUBLIC MEETING
	SEPTEMBER 24-25, 2008

Is your allotment included in this study? ☒ Yes ☐ No

If yes, what group is it in? ☐ Northern ☐ Northeast ☒ Hwy 395

What is your allotment number? 729, 730, 731, 732 - 2

Do you or any fellow owners of your allotment have any future plans for leasing all or part of your allotment for residential, commercial, or industrial uses?

☒ Yes

If yes, what type? residential community

☐ No

How important is it to establish development standards through the BIA leasing process to protect your allotment from development on a neighboring allotment?

☐ Very Important ☐ Somewhat Important ☐ Not Important ?

What type of development is on your allotment?

☐ 1 home (for allotment owner)

☐ 2 or more homes (for allotment owners)

☒ Residential Subdivision

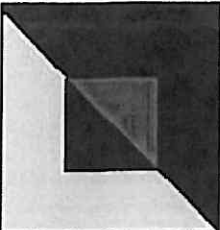
☐ Commercial

☐ Light Industrial

☐ Undeveloped

☐ Other _____

Any other comments?

 <div> <p>Bureau of Indian Affairs Western Regional Office Pine Nut Allotments Land Use and Development Plan</p> <p><i>Comments</i></p> </div>	PUBLIC MEETING
	SEPTEMBER 24-25, 2008

Is your allotment included in this study? ☒ Yes ☐ No

If yes, what group is it in? ☒ Northern ☐ Northeast ☐ Hwy 395

What is your allotment number? ALL

Do you or any fellow owners of your allotment have any future plans for leasing all or part of your allotment for residential, commercial, or industrial uses?

☒ Yes

If yes, what type? Not sure

☐ No

How important is it to establish development standards through the BIA leasing process to protect your allotment from development on a neighboring allotment?

☒ Very Important ☐ Somewhat Important ☐ Not Important

What type of development is on your allotment?

☐ 1 home (for allotment owner)

☐ 2 or more homes (for allotment owners)

☐ Residential Subdivision

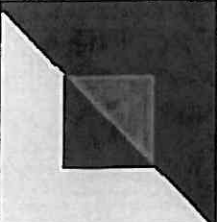
☐ Commercial

☐ Light Industrial

☒ Undeveloped

☐ Other _____

Any other comments?

 <p>Bureau of Indian Affairs Western Regional Office Pine Nut Allotments Land Use and Development Plan</p> <p>Comments</p>	PUBLIC MEETING
	SEPTEMBER 24-25, 2008

Is your allotment included in this study? ☒ Yes ☐ No

If yes, what group is it in? ☐ Northern ☒ Northeast ☐ Hwy 395

What is your allotment number? 444, 447 + 448

Do you or any fellow owners of your allotment have any future plans for leasing all or part of your allotment for residential, commercial, or industrial uses?

☐ Yes

If yes, what type? _____

☒ No

How important is it to establish development standards through the BIA leasing process to protect your allotment from development on a neighboring allotment?

☐ Very Important ☐ Somewhat Important ☒ Not Important

What type of development is on your allotment?

☐ 1 home (for allotment owner)

☒ 2 or more homes (for allotment owners)

☐ Residential Subdivision

☐ Commercial

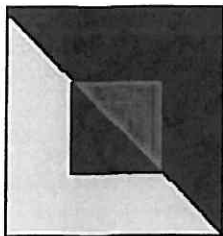
☐ Light Industrial

☐ Undeveloped

☐ Other _____

Any other comments?

THIS LAND IS SACRED CEREMONIAL LAND
AND SHOULD BE LEFT AS IS!

 <p>Bureau of Indian Affairs Western Regional Office Pine Nut Allotments Land Use and Development Plan</p> <p>Comments</p>	PUBLIC MEETING
	SEPTEMBER 24-25, 2008

Is your allotment included in this study? ☒ Yes ☐ No

If yes, what group is it in? ☐ Northern ☐ Northeast ☐ Hwy 395

What is your allotment number? N.E. 446-447-448

Do you or any fellow owners of your allotment have any future plans for leasing all or part of your allotment for residential, commercial, or industrial uses?

☐ Yes

If yes, what type? _____

☒ No

How important is it to establish development standards through the BIA leasing process to protect your allotment from development on a neighboring allotment?

☐ Very Important ☐ Somewhat Important ☒ Not Important

What type of development is on your allotment?

☐ 1 home (for allotment owner)

☒ or more homes (for allotment owners)

☐ Residential Subdivision

☐ Commercial

☐ Light Industrial

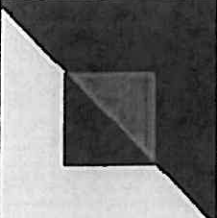
☐ Undeveloped

☐ Other _____

Any other comments?

no commercial development

residential use only - for allottees only

 <p>Bureau of Indian Affairs Western Regional Office Pine Nut Allotments Land Use and Development Plan</p> <p>Comments</p>	PUBLIC MEETING
	SEPTEMBER 24-25, 2008

Is your allotment included in this study? ☒ Yes ☐ No

If yes, what group is it in? ☐ Northern ☐ Northeast ☒ Hwy 395

What is your allotment number? Multiple

Do you or any fellow owners of your allotment have any future plans for leasing all or part of your allotment for residential, commercial, or industrial uses?

☐ Yes

If yes, what type? _____

☐ No

How important is it to establish development standards through the BIA leasing process to protect your allotment from development on a neighboring allotment?

☒ Very Important ☐ Somewhat Important ☐ Not Important

What type of development is on your allotment?

☐ 1 home (for allotment owner)

☐ 2 or more homes (for allotment owners)

☐ Residential Subdivision

☐ Commercial

☐ Light Industrial

☒ Undeveloped

☐ Other _____

Any other comments?

I think the meeting held was very informative.
I hope future meetings can be held to keep
Allotment holders informed. I think the BIA should look
into partnerships for Allottees not just leasing.

Is your allotment included in this study? ☒ Yes ☐ No

If yes, what group is it in? ☐ Northern ☐ Northeast ☒ Hwy 395

What is your allotment number? _____

Do you or any fellow owners of your allotment have any future plans for leasing all or part of your allotment for residential, commercial, or industrial uses?

☐ Yes

If yes, what type? 17

☒ No

How important is it to establish development standards through the BIA leasing process to protect your allotment from development on a neighboring allotment?

☒ Very Important ☐ Somewhat Important ☐ Not Important

What type of development is on your allotment?

☐ 1 home (for allotment owner)

☐ 2 or more homes (for allotment owners)

☐ Residential Subdivision

☐ Commercial

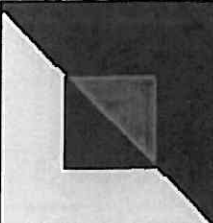
☐ Light Industrial

☒ Undeveloped g

☐ Other g

Any other comments?

Why is BIA encouraging people to
lease or sale their land to
White people. //

 <p>Bureau of Indian Affairs Western Regional Office Pine Nut Allotments Land Use and Development Plan</p> <p>Comments</p>	PUBLIC MEETING
	SEPTEMBER 24-25 , 2008

Is your allotment included in this study? ☒ Yes ☐ No

If yes, what group is it in? ☐ Northern ☐ Northeast ☒ Hwy 395

What is your allotment number? 203

Do you or any fellow owners of your allotment have any future plans for leasing all or part of your allotment for residential, commercial, or industrial uses?

☐ Yes

If yes, what type? _____

☒ No

How important is it to establish development standards through the BIA leasing process to protect your allotment from development on a neighboring allotment?

☐ Very Important ☐ Somewhat Important ☐ Not Important

What type of development is on your allotment?

☐ 1 home (for allotment owner)

☐ 2 or more homes (for allotment owners)

☐ Residential Subdivision

☐ Commercial

☐ Light Industrial

☒ Undeveloped

☐ Other private camp

Any other comments?

Public Meeting, Carson City, NV
September 25, 2008

Pine Nut Allotments (NV) Land Use and Development Plan

Public Meeting

Carson City Senior Center, Carson City, NV

September 25, 2008, 7:00 – 9:00 p.m.

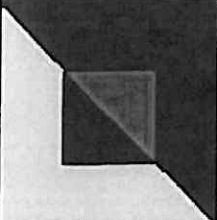
Attendees: **Consultant Team:** Dennis Petrequin, Lee Smith, John Nelson, Mary Bedard, and Jeff Barry.

BIA: Athena Brown, Stan Webb, Mike Johnson, Dave Smith, Carolyn Bowker, Amy Hueslein, Gary Cantley, Karen Whitenton, Rosanna Roberts, Paula Hunsberger, Amy Roberts, Utahna Enriquez, and Julianna Hernandez. Fifty-seven signed-in as community members (See attached list.)

1. Athena Brown, Superintendent of the BIA Western Nevada Agency, opened the meeting with a welcome to the community and introduced Stan Webb, Regional Realty Officer, BIA Western Regional Office.
2. Stan provided a brief overview of the project and the process to date. He explained the BIA's need for guidelines for future development where leases are involved, and reassured the attendees that individual development projects would not be affected by these guidelines.
3. Mike Johnson, the COR and Realty Specialist from the BIA Western Regional Office, explained the local involvement with the project and the meeting structure. He introduced the other BIA personnel and their roles in the meeting. He fielded several questions regarding individual allotments and the status of local conditions and projects.
4. Dave Smith, BIA Western Nevada Agency, presented the results of the recently completed Vegetation Report and its implications for future grazing permits. He urged community members to return the permit form, when received, with their choice of allowing or disallowing grazing leases on their land. He fielded a number of questions.
5. Lee Smith, economist with the consultant team, presented his findings from the market assessment and trend analysis. He reassured the audience that although housing development is currently in a slump, it will go up again and that this project will provide guidance for those future developments.
6. Mary Bedard, a community involvement specialist with the consultant team, narrated a slide presentation highlighting the consultants' work. The physical characteristics of the allotments, combined with the market assessment, resulted in the "highest and best" uses of each allotment. Attendees were urged to view the wall graphics and ask questions of individual consultants in the open house breakout that followed.
7. BIA personnel were available at one table to provide allotment owners with their allotment numbers, if needed. Another table provided Office of the Special Trustee information on the status of the allotments. One table provided printouts of the individual allotment summaries of development suitability from the consultants' report. Jeff Barry, a hydro-geologist with the consultant team, was available at a table to talk about water availability on individual allotments.
8. Although the open house portion was less time than expected, due to the many audience questions, many allotment owners had a chance to talk with the members of the consultant team about their allotment(s) and seemed satisfied as to what the study was to accomplish.

Pine Nut Allotments (NV) Land Use Development Plan

#	in Study			Group			Number(s)			ND			future lease			Importance of Development Stds				Existing Development							Comments
	Yes	No	ND	Northern	Northeast	Hwy 395	ND	Number(s)	ND	Yes	No	Type	ND	Very	Somewhat	Not	ND	1 home	2+ homes	Subdivision	Commercial	Lt Industrial	Undeveloped	Other	ND		
14	1					1			1			maybe		1				1								This is very interesting A lot of work ahead	
15		1					1		1	1				1						1							
16	1					1		241, 239, 240,	1		1			1									1				
17	1					1		244		1				1									1			Would like to try and consolidate our parcels to less owners Don't know what are on my land	
18	1					1		233, 232		1						1						1					
19	1					1		323, 324, 325		1				1								1					
20	1					1		113, 114, 115,	1	1		horse		1											1		
21	1					1		269 + more		1				1									1				
								190, 191, 202,																			
								203, 206, 207,																			
								211, 217, 227,																			
								230, 250, 253,																			
								257, 258, 273,																			
								297, 299, 300,																			
22		1				1		471, 724		1				1										none	Good meeting. Would of liked more handouts of the maps.		
23	1					1		417		1				1									1				
								331, 330, 291,																			
24	1					1		728, 707		1				1						1							
9	0	2	0	2	7	3			4	3	7		0	10	0	0	1	1	0	2	0	0	0	6			

 <p>Bureau of Indian Affairs Western Regional Office Pine Nut Allotments Land Use and Development Plan</p> <p>Comments</p>	PUBLIC MEETING
	SEPTEMBER 24-25, 2008

Is your allotment included in this study? ☒ Yes ☐ No

If yes, what group is it in? ☐ Northern ☐ Northeast ☒ Hwy 395

What is your allotment number? _____

Do you or any fellow owners of your allotment have any future plans for leasing all or part of your allotment for residential, commercial, or industrial uses?

☐ Yes *maybe*

If yes, what type? _____

☐ No

How important is it to establish development standards through the BIA leasing process to protect your allotment from development on a neighboring allotment?

☒ Very Important ☐ Somewhat Important ☐ Not Important

What type of development is on your allotment?

☒ 1 home (for allotment owner)

☐ 2 or more homes (for allotment owners)

☐ Residential Subdivision

☐ Commercial

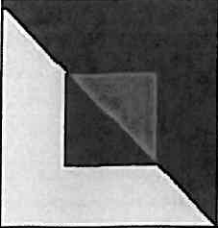
☐ Light Industrial

☐ Undeveloped

☐ Other _____

Any other comments?

This very interesting.

 <p>Bureau of Indian Affairs Western Regional Office Pine Nut Allotments Land Use and Development Plan</p> <p>Comments</p>	PUBLIC MEETING
	SEPTEMBER 24-25, 2008

Is your allotment included in this study? ☐ Yes ☒ No

If yes, what group is it in? ☐ Northern ☐ Northeast ☐ Hwy 395

What is your allotment number? ?

Do you or any fellow owners of your allotment have any future plans for leasing all or part of your allotment for residential, commercial, or industrial uses?

☒ Yes

If yes, what type? _____

☐ No

How important is it to establish development standards through the BIA leasing process to protect your allotment from development on a neighboring allotment?

☒ Very Important ☐ Somewhat Important ☐ Not Important

What type of development is on your allotment?

☐ 1 home (for allotment owner)

☐ 2 or more homes (for allotment owners)

☒ Residential Subdivision

☐ Commercial

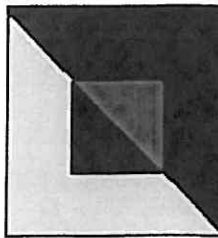
☐ Light Industrial

☐ Undeveloped

☒ Other _____

Any other comments?

a lot of work ahead.

 <p>Bureau of Indian Affairs Western Regional Office Pine Nut Allotments Land Use and Development Plan</p> <p>Comments</p>	PUBLIC MEETING
	SEPTEMBER 24-25, 2008

Is your allotment included in this study? ☐ Yes ☐ No

Unknown

If yes, what group is it in? ☐ Northern ☐ Northeast ☐ Hwy 395

What is your allotment number? _____

Do you or any fellow owners of your allotment have any future plans for leasing all or part of your allotment for residential, commercial, or industrial uses?

☐ Yes

If yes, what type? _____

☒ No

How important is it to establish development standards through the BIA leasing process to protect your allotment from development on a neighboring allotment?

☒ Very Important ☐ Somewhat Important ☐ Not Important

What type of development is on your allotment?

☐ 1 home (for allotment owner)

☐ 2 or more homes (for allotment owners)

☐ Residential Subdivision

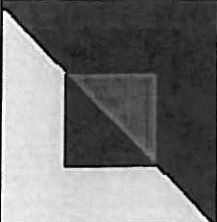
☐ Commercial

☐ Light Industrial

☒ Undeveloped

☐ Other _____

Any other comments?

 <p>Bureau of Indian Affairs Western Regional Office Pine Nut Allotments Land Use and Development Plan</p> <p>Comments</p>	PUBLIC MEETING
	SEPTEMBER 24-25, 2008

Is your allotment included in this study? ☒ Yes ☐ No

If yes, what group is it in? ☐ Northern ☐ Northeast ☒ Hwy 395

What is your allotment number? 241, 239, 240, 244

Do you or any fellow owners of your allotment have any future plans for leasing all or part of your allotment for residential, commercial, or industrial uses?

☐ Yes

If yes, what type? _____

☒ No

How important is it to establish development standards through the BIA leasing process to protect your allotment from development on a neighboring allotment?

☒ Very Important ☐ Somewhat Important ☐ Not Important

What type of development is on your allotment?

☐ 1 home (for allotment owner)

☐ 2 or more homes (for allotment owners)

☐ Residential Subdivision

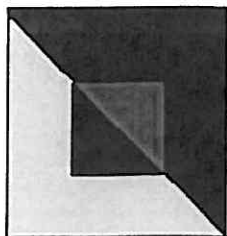
☐ Commercial

☐ Light Industrial

☒ Undeveloped

☐ Other _____

Any other comments?

 <p>Bureau of Indian Affairs Western Regional Office Pine Nut Allotments Land Use and Development Plan</p> <p>Comments</p>	PUBLIC MEETING
	SEPTEMBER 24-25, 2008

Is your allotment included in this study? ☒ Yes ☐ No

If yes, what group is it in? ☐ Northern ☐ Northeast ☒ Hwy 395

What is your allotment number? 233, 232

Do you or any fellow owners of your allotment have any future plans for leasing all or part of your allotment for residential, commercial, or industrial uses?

☒ Yes

If yes, what type? _____

☐ No

How important is it to establish development standards through the BIA leasing process to protect your allotment from development on a neighboring allotment?

☐ Very Important ☐ Somewhat Important ☐ Not Important

What type of development is on your allotment?

☐ 1 home (for allotment owner)

☐ 2 or more homes (for allotment owners)

☐ Residential Subdivision

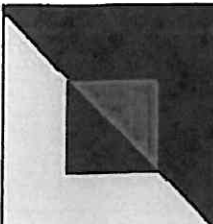
☐ Commercial

☐ Light Industrial

☒ Undeveloped

☐ Other _____

Any other comments?

 <p>Bureau of Indian Affairs Western Regional Office Pine Nut Allotments Land Use and Development Plan</p> <p>Comments</p>	PUBLIC MEETING
	SEPTEMBER 24-25, 2008

Is your allotment included in this study? ☒ Yes ☐ No

If yes, what group is it in? ☐ Northern ☐ Northeast ☒ Hwy 395

What is your allotment number? 323, 324, 325

Do you or any fellow owners of your allotment have any future plans for leasing all or part of your allotment for residential, commercial, or industrial uses?

☐ Yes

If yes, what type? _____

☒ No

How important is it to establish development standards through the BIA leasing process to protect your allotment from development on a neighboring allotment?

☒ Very Important ☐ Somewhat Important ☐ Not Important

What type of development is on your allotment?

☐ 1 home (for allotment owner)

☐ 2 or more homes (for allotment owners)

☐ Residential Subdivision

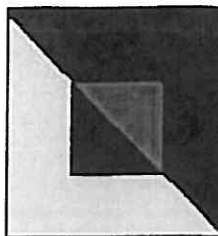
☐ Commercial

☐ Light Industrial

☒ Undeveloped

☐ Other _____

Any other comments?

 <p>Bureau of Indian Affairs Western Regional Office Pine Nut Allotments Land Use and Development Plan</p> <p>Comments</p>	PUBLIC MEETING
	SEPTEMBER 24-25, 2008

Is your allotment included in this study? ☒ Yes ☐ No

If yes, what group is it in? ☐ Northern ☐ Northeast ☒ Hwy 395

What is your allotment number? _____

Do you or any fellow owners of your allotment have any future plans for leasing all or part of your allotment for residential, commercial, or industrial uses?

☒ Yes

If yes, what type? Home

☐ No

How important is it to establish development standards through the BIA leasing process to protect your allotment from development on a neighboring allotment?

☒ Very Important ☐ Somewhat Important ☐ Not Important

What type of development is on your allotment?

☐ 1 home (for allotment owner)

☐ 2 or more homes (for allotment owners)

☐ Residential Subdivision

☐ Commercial

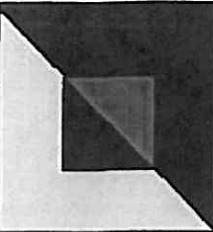
☐ Light Industrial

☐ Undeveloped

☐ Other _____

Any other comments?

Would like to try and
consolidate our parcels to
less owners

 <p>Bureau of Indian Affairs Western Regional Office Pine Nut Allotments Land Use and Development Plan</p> <p>Comments</p>	PUBLIC MEETING
	SEPTEMBER 24-25, 2008

Is your allotment included in this study? ☒ Yes ☐ No

If yes, what group is it in? ☐ Northern ☒ Northeast ☒ Hwy 395

What is your allotment number? 113, 114, 115, 209 plus more

Do you or any fellow owners of your allotment have any future plans for leasing all or part of your allotment for residential, commercial, or industrial uses?

☐ Yes

If yes, what type? _____

☒ No

How important is it to establish development standards through the BIA leasing process to protect your allotment from development on a neighboring allotment?

☒ Very Important ☐ Somewhat Important ☐ Not Important

What type of development is on your allotment?

☐ 1 home (for allotment owner)

☐ 2 or more homes (for allotment owners)

☐ Residential Subdivision

☐ Commercial

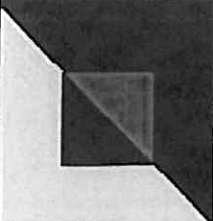
☐ Light Industrial

☒ Undeveloped

☐ Other _____

Any other comments?

Don't know what are on my land.

 <p>Bureau of Indian Affairs Western Regional Office Pine Nut Allotments Land Use and Development Plan</p> <p>Comments</p>	PUBLIC MEETING
	SEPTEMBER 24-25, 2008

Is your allotment included in this study? ☐ Yes ☐ No

If yes, what group is it in? ☐ Northern ☐ Northeast ☐ Hwy 395

What is your allotment number? 190, 191, 202, 203, 206, 207, 211, 217, 227, 230, 250, 253, 254, 257, 258, 273, 297, 299, 300, 471, 724

Do you or any fellow owners of your allotment have any future plans for leasing all or part of your allotment for residential, commercial, or industrial uses?

☐ Yes

If yes, what type? _____

☒ No

How important is it to establish development standards through the BIA leasing process to protect your allotment from development on a neighboring allotment?

☒ Very Important ☐ Somewhat Important ☐ Not Important

What type of development is on your allotment?

☐ 1 home (for allotment owner)

☐ 2 or more homes (for allotment owners)

☐ Residential Subdivision

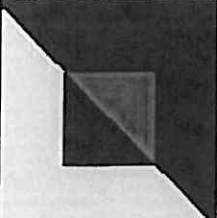
☐ Commercial

☐ Light Industrial

☐ Undeveloped

☐ Other None

Any other comments?

 <p><i>Bureau of Indian Affairs Western Regional Office</i> <i>Pine Nut Allotments Land Use and Development Plan</i></p> <p>Comments</p>	PUBLIC MEETING
	SEPTEMBER 24-25, 2008

Is your allotment included in this study? ☒ Yes ☐ No

If yes, what group is it in? ☐ Northern ☒ Northeast ☐ Hwy 395

What is your allotment number? 417

Do you or any fellow owners of your allotment have any future plans for leasing all or part of your allotment for residential, commercial, or industrial uses?

☐ Yes

If yes, what type? _____

☒ No

How important is it to establish development standards through the BIA leasing process to protect your allotment from development on a neighboring allotment?

☒ Very Important ☐ Somewhat Important ☐ Not Important

What type of development is on your allotment?

☐ 1 home (for allotment owner)

☐ 2 or more homes (for allotment owners)

☐ Residential Subdivision

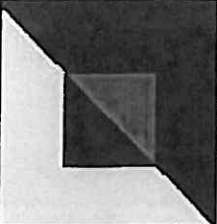
☐ Commercial

☐ Light Industrial

☒ Undeveloped

☐ Other _____

Any other comments?

 <p>Bureau of Indian Affairs Western Regional Office Pine Nut Allotments Land Use and Development Plan</p> <p>Comments</p>	PUBLIC MEETING
	SEPTEMBER 24-25, 2008

Is your allotment included in this study? ☒ Yes ☐ No

If yes, what group is it in? ☐ Northern ☐ Northeast ☒ Hwy 395

What is your allotment number? 331, 330, 291, 728, 707

Do you or any fellow owners of your allotment have any future plans for leasing all or part of your allotment for residential, commercial, or industrial uses?

☐ Yes

If yes, what type? _____

☒ No - NOT AT THIS TIME

How important is it to establish development standards through the BIA leasing process to protect your allotment from development on a neighboring allotment?

☒ Very Important ☐ Somewhat Important ☐ Not Important

What type of development is on your allotment?

☐ 1 home (for allotment owner)

☐ 2 or more homes (for allotment owners)

☒ Residential Subdivision

☒ Commercial

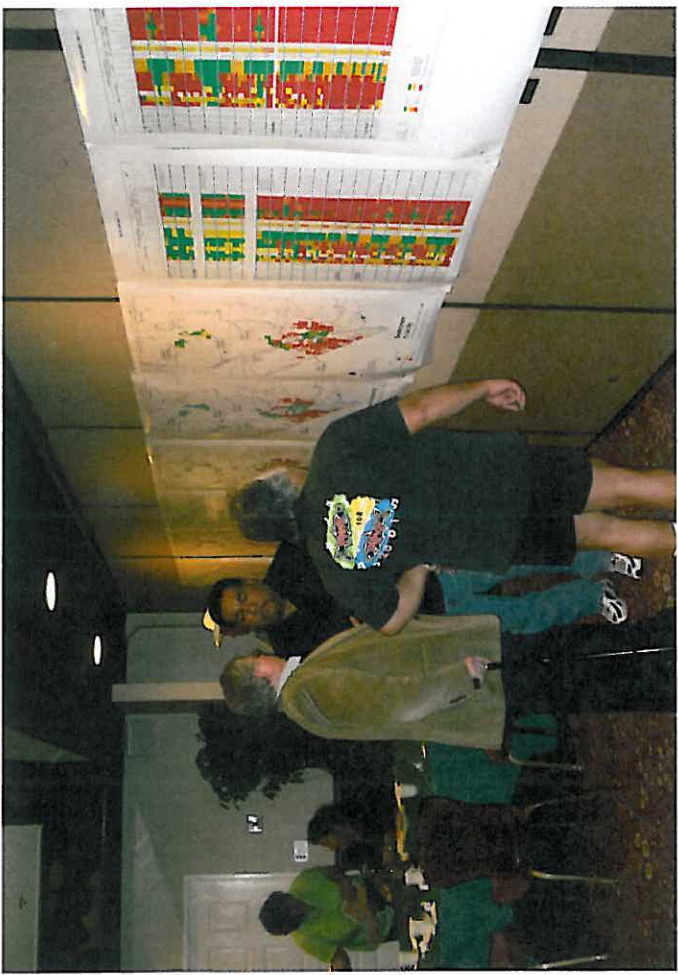
☐ Light Industrial

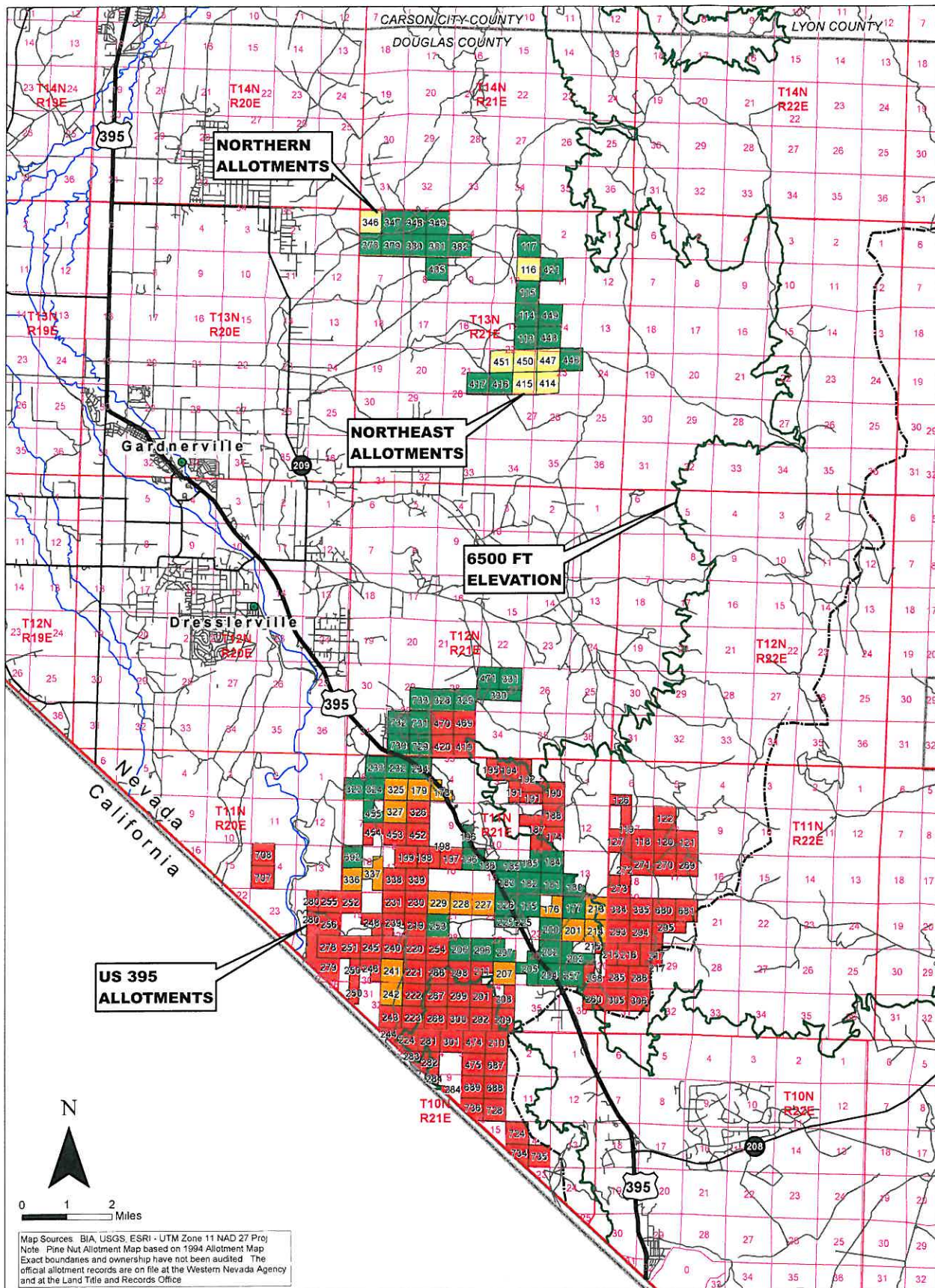
☐ Undeveloped

☐ Other _____

Any other comments?

Good Meeting. Would OF LIKED MORE HANDOUTS
OF THE MAPS.





Legend

- 6500 Ft. El.
- Local Road
- ▭ Carson River Watershed Boundary
- 50 Meter Contours

- Development Suitability**
- Good
 - Fair
 - Marginal
 - Not Developable

Development Suitability

Pine Nut Allotments, Douglas County, Nevada

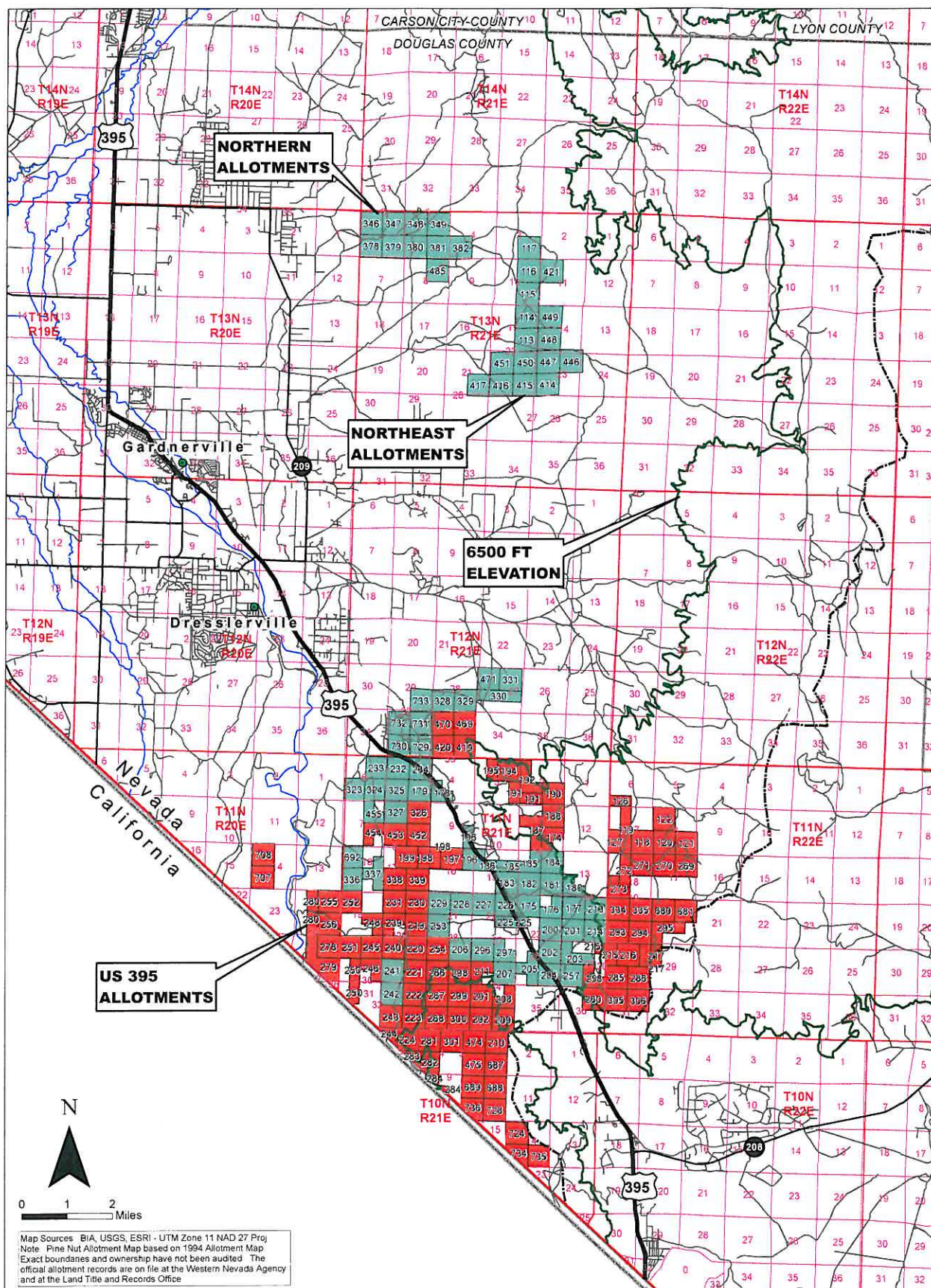
Map Prepared by Cascade Design Professionals, Inc., Sept. 2008

LAND USE ASSESSMENT MATRIX

ALLOTMENT DATA					PHYSICAL CHARACTERISTICS										HIGHEST & BEST USE										NOTES
Allotment No.	Allotment Name	Size (acres)	Location	No. of Owners	Current Land Use	Topography		Accessibility		Public Services & Health & Safety			Cultural Res.	Natural Resources	Commercial Residential		Commercial Investment		Comm. Rec.	Other		Notes			
						Slope (%)	Altitude	Existing Road	Miles from nearest road	Developable (Yes/No)	Storage Treatment	Proximity to Power (miles)			Proximity to Communications (miles)	High Density (suburban)	Medium Density	Low Density (rural)					Highway Retail	Neighborhood Services	Light Industrial
Northern Allotments																									
346	Deve Mo Sh	148.60	North	Undev	12.20	<5000	Yes	1.0	Yes	Marginal	2.5	1.9	No	Fair	No	No	No	M	No	No	M				
347	Mary Dick	161.30	North	Undev	6.9	<5000	Yes	1.5	Yes	Marginal	1.5	1.5	No	Fair	No	No	Yes	Yes	No	M	No	Yes			
348	Wallace Dick	161.45	North	Undev	6.6	<5000	Yes	2.0	Yes	Yes	2.5	2.5	No	Fair	No	Yes	Yes	Yes	No	M	No	Yes			
349	Walter Dick	160.90	North	Undev	6.6	<5000	Yes	2.5	Yes	Yes	2.5	2.5	No	Fair	No	Yes	Yes	Yes	No	M	No	Yes			
350	Joe Dick	160.12	North	Undev	6.9	<5000	Yes	3.0	Yes	Yes	3.0	3.0	No	Fair	No	Yes	Yes	Yes	No	M	No	Yes			
378	Life/Carley	148.60	North	Undev	6.6	<5000	Yes	1.0	Yes	Yes	1.0	1.9	No	Fair	No	Yes	Yes	Yes	No	M	No	Yes			
379	Scott Dick	160.03	North	Undev	6.6	<5000	Yes	1.5	Yes	Yes	1.5	1.5	No	Fair	No	Yes	Yes	Yes	No	M	No	Yes			
380	Wm Dave H	150.00	North	Undev	6.6	<5000	Yes	2.5	Yes	Yes	2.5	2.5	No	Fair	No	Yes	Yes	Yes	No	M	No	Yes			
381	Seaside Yard	160.00	North	Undev	6.6	<5000	No	2.5	Yes	Yes	2.5	2.5	No	Fair	No	Yes	Yes	Yes	No	M	No	Yes			
382	Willie Tony	160.00	North	Undev	6.9	<5000	Yes	3.0	Yes	Yes	3.0	3.0	No	Fair	No	M	Yes	Yes	No	M	No	Yes			
405			North	Undev	6.6	<5000	Yes	3.0	Yes	Yes	3.0	3.0	No	Fair	No	Yes	Yes	Yes	No	M	No	Yes			
Total Ac.					1500.00																				
Northeastern Allotments																									
117	Summe Jim	160.00	NE	Undev	6.6	<5000	Yes	5.0	Yes	Yes	5.0	5.0	No	Fair	No	Yes	Yes	Yes	No	M	No	Yes			
116	Louis Jim or	160.00	NE	Undev	6.9	<5000	No	5.0	Yes	Yes	5.0	5.0	No	Fair	No	M	Yes	Yes	No	M	No	Yes			
421	Dave L.H. L	160.00	NE	Undev	6.9	<5000	Yes	6.0	Yes	Yes	5.5	5.5	No	Fair	No	M	Yes	Yes	No	M	No	Yes			
115	John Charle	160.00	NE	Undev	6.6	<5000	Yes	5.5	Yes	Yes	5.5	5.5	No	Fair	No	Yes	Yes	Yes	No	M	No	Yes			
114	Magpie Jim	160.00	NE	Undev	6.6	<5000	Yes	6.0	Yes	Yes	5.5	5.5	No	Fair	No	Yes	Yes	Yes	No	M	No	Yes			
449	Summe Jim	160.00	NE	Undev	6.6	<5000	Yes	5.5	Yes	Yes	4.0	4.0	No	Fair	No	Yes	Yes	Yes	No	M	No	Yes			
113	Jim Jacob	160.00	NE	Undev	6.9	<5000	Yes	7.5	Yes	Yes	3.5	3.5	No	Fair	No	M	Yes	Yes	No	M	No	Yes			
446	Dick Jim or A	160.00	NE	Undev	6.6	<5000	Yes	7.0	Yes	Yes	4.0	4.0	No	Fair	No	Yes	Yes	Yes	No	M	No	Yes			
451	Morgan Dave	160.00	NE	Undev	6.9	<5000	No	8.0	Yes	Yes	3.0	3.0	No	Fair	No	M	Yes	Yes	No	M	No	Yes			
450	Dave or Sco	160.00	NE	Undev	9-12	<5000	No	8.5	Yes	Marginal	3.5	3.5	No	Fair	No	No	M	Yes	No	M	No	Yes			
447	Wm Fendler	160.00	NE	Undev	6.9	<5000	No	9.0	Yes	Yes	4.0	4.0	No	Fair	No	M	Yes	Yes	No	M	No	Yes			
446	Mary Fendler	160.00	NE	Undev	6.6	<5000	Yes	8.5	Yes	Yes	4.5	4.5	No	Fair	No	M	Yes	Yes	No	M	No	Yes			
417	Mary Jacob	160.00	NE	Undev	6.6	<5000	Yes	7.0	Yes	Yes	2.5	2.5	No	Fair	No	M	Yes	Yes	No	M	No	Yes			
416	Grant Jacob	160.00	NE	Undev	6.9	<5000	Yes	7.5	Yes	Yes	3.0	3.0	No	Fair	No	M	Yes	Yes	No	M	No	Yes			
415	Calvert Jack	160.00	NE	Undev	6.9	<5000	No	8.0	Yes	Yes	3.5	3.5	No	Fair	No	M	Yes	Yes	No	M	No	Yes			
414	Jack Jacob	160.00	NE	Undev	6.9	<5000	No	8.5	Yes	Yes	4.0	4.0	No	Fair	No	M	Yes	Yes	No	M	No	Yes			
Total Ac.					2560.00																				
U.S. 395 Allotments																									
471	Magpie Ann	160.00	US 395	Undev	6.6	<5500	Yes	>2.0	Yes	Yes	>2.0	>2.0	No	Fair	No	No	M	M	Yes	M	M	Yes			
329	Samuel Dick	160.00	US 395	Undev	6.9	<5500	Yes	>2.0	Yes	Yes	>2.0	>2.0	No	M	No	M	M	Yes	No	M	No	Yes			
733	Savannee Snd	160.00	US 395	Undev	8.9	<5500	Yes	1.1	Yes	Yes	1.1	1.1	No	Fair	No	M	M	Yes	No	M	No	Yes			
328	Alcock or Galt	160.00	US 395	Undev	12.20	5800	Yes	1.3	Yes	Marginal	1.3	1.3	No	M	No	No	M	M	Yes	No	M	No			
329	Lucy Alcock	160.00	US 395	Undev	6.9	5800	Yes	1.5	Yes	Yes	1.5	1.5	No	M	No	No	M	Yes	No	M	No	Yes			
330	Minnie Alcock	160.00	US 395	Undev	9-12	5000	Yes	2.0	Yes	Marginal	2.0	2.0	No	M	No	No	M	M	Yes	No	M	No			
732	Lower Snook	160.00	US 395	Subdiv	6.9	<5500	Yes	0.4	Yes	Yes	0.4	0.4	No	Fair	No	M	Yes	Yes	No	M	No	Yes			
731	Geo Snook	160.00	US 395	Homes	6.9	<5500	Yes	0.6	Yes	Yes	0.6	0.6	No	Fair	No	M	Yes	Yes	No	M	No	Yes			
470	Annie Tom	160.00	US 395	Undev	>2.0	5800	Yes	1.8	No	No	1.8	1.8	No	V.P.	No	No	No	No	No	No	No	No			
469	Joe (Bart) Ta	160.00	US 395	Undev	>2.0	<5500	No	2.5	No	No	2.5	2.5	No	M	No	No	No	No	No	No	No	No			
730	Tile Snook	160.00	US 395	Homes	0-6	<5500	Yes	1.0	Yes	Yes	1.0	1.0	No	Fair	No	M	Yes	Yes	Yes	M	M	Yes			
729	Indian Snook	162.50	US 395	Homes	0-6	<5500	Yes	0.3	Yes	Yes	0.3	0.3	No	Fair	No	M	Yes	Yes	Yes	M	M	Yes			
420	Scove (Hill)	160.00	US 395	Undev	>2.0	5800	Yes	0.8	No	No	0.8	0.8	No	V.P.	No	No	No	No	No	No	No	No			
419	(Walmart)	160.00	US 395	Undev	>2.0	6500	Yes	1.3	No	No	1.3	1.3	Marginal	V.P.	No	No	No	No	No	No	No	Yes			
233	Annie Joe	161.06	US 395	Undev	6.9	<5500	Yes	0.3	Yes	Yes	0.3	0.3	No	Fair	No	M	Yes	Yes	No	M	No	Yes			
232	Little Joe or	161.45	US 395	Undev	9-12	<5500	Yes	0.5	Yes	Marginal	0.5	0.5	No	Fair	No	M	M	Yes	M	M	No	Yes			
234	Magpie Joe	98.10	US 395	Subdiv	6.9	<5500	Yes	0.6	Yes	Yes	0.6	0.6	No	Fair	No	Yes	Yes	Yes	M	M	No	Yes			
195	Oge Shney	119.39	US 395	Undev	12.20	<5500	Yes	2.7	Yes	Marginal	2.7	2.7	Yes	V.P.	No	No	No	No	No	No	No	Yes			
194	Johnny Snd	158.07	US 395	Undev	9-12	<5500	Yes	2.3	Yes	Marginal	2.3	2.3	Yes	V.P.	No	No	No	No	No	No	No	Yes			
192	Sally Peds	156.82	US 395	Undev	12.20	<5500	Yes	2.8	Yes	Marginal	2.8	2.8	Yes	V.P.	No	No	No	No	No	No	No	Yes			
323	Ezra Washi	154.25	US 395	Undev	9-12	<5500	Yes	1.0	Yes	Marginal	1.0	1.0	No	Fair	No	No	M	Yes	No	No	No	Yes			
324	Geo Washi	160.00	US 395	Homes	9-12	<5500	Yes	0.8	Yes	Marginal	0.8	0.8	No	Fair	No	No	M	Yes	No	No	No	Yes			
325	David Washi	160.00	US 395	Undev	9-12	<5500	Yes	0.8	Yes	Marginal	0.8	0.8	No	Fair	No	No	M	Yes	No	No	No	Yes			
129	Sally Jim	160.00	US 395	Undev	>2.0	<5500	Yes	0.1	Marginal	Marginal	0.1	0.1	No	Fair	No	No	M	Yes	No	No	No	Yes			
176	Jim Or Coy	120.00	US 395	Undev	>2.0	<5500	Yes	0.1	Marginal	Marginal	0.1	0.1	No	Fair	No	No	M	Yes	No	No	No	Yes			
191	Annie Pead	160.00	US 395	Undev	12-20	<5500	Yes	2.0	Yes	Marginal	2.0	2.0	Yes	V.P.	No	No	No	No	No	No	No	Yes			
190	BATE LOY	160.00	US 395	Undev	>2.0	<5500	Yes	>3.0	Yes	Marginal	>3.0	>3.0	Yes	V.P.	No	No	No	No	No	No	No	Yes			
126	Jim Or Coy	157.15	US 395	Undev	>2.0	<5500	Yes	>3.0	Yes	No	>2.0	>2.0	Yes	V.P.	No	No	No	No	No	No	No	Yes			
455	Bridy Bath	120.00	US 395	Undev	9-12	<5500	Yes	1.4	Yes	Marginal	1.4	1.4	No	Fair	No	No	No	Yes	No	No	No	Yes			
327	Nannie Bli	160.00	US 395	Undev	12.20	<5500	Yes	1.8	Marginal	Marginal	1.8	1.8	No	Fair	No	No	No	M	Yes	No	No	Yes			
326	De-Man Sh	160.00	US 395	Undev	>2.0	<5500	Yes	1.1	Yes	Marginal	1.1	1.1	No	Fair	No	No	No	No	No	No	No	Yes			
167	Dave Cheen	160.00	US 395	Undev	12.20	6000	Yes	2.4	No	Marginal	2.4	2.4	Marginal	V.P.	No	No	No	No	No	No	No	Yes			
188	Loon Cheen	160.00	US 395	Undev	>2.0	<5500	Yes	2.8	No	Marginal	2.8	2.8	Yes	V.P.	No	No	No	No	No	No	No	Yes			
118		160.00	US 395	Undev	12-20	<5500	Yes	0.9	Yes	Marginal	0.9	0.9	Yes	V.P.	No	No	No	No	No	No	No	Yes			
122		160.00	US 395	Undev	>2.0	<5500	Yes	>4.0	Yes	Marginal	>4.0	>4.0	Yes	V.P.	No	No	No	No	No	No	No	Yes			
454	Dwidy Bath	120.00	US 395	Undev	12-20	5800	Yes	1.1	No	Marginal	1.1	1.1	No	Fair	No	No	No	No	No	No	No	Yes			
453	Polly Bath	160.00	US 395	Undev	>2.0	<5500	Yes	1.8	No	Marginal	1.8	1.8	No	Fair	No	No	No	No	No	No	No	Yes			
452	Sam Bath	160.00	US 395	Undev	12-20	<5500	Yes	2.0	No	Marginal	2.0	2.0	No	Fair	No	No	No	No	No	No	No	Yes			
196	Willie Snook	160.00	US 395	House	6.9	<5500	Yes	0.5	Yes	Yes	0.5	0.5	No	V.P.	No	No	M	Yes	Yes	M	No	Yes			
174	Manny Benc	160.00	US 395	Undev	>2.0	6500	Yes	1.6	No	No	1.6	1.6	Marginal	V.P.	No	No	No	No	Yes	No	No	Yes			
127	Subbie Jim	157.32	US 395	Undev	12.20	<5500	Yes	2.8	Yes	Marginal	>2.0	>2.0	Yes	V.P.	No	No	No	No	No	No	No	Yes			
116		160.00	US 395	Undev	>2.0	<5500	Yes	>3.0	No	Marginal	>2.0	>2.0	Yes	V.P.	No	No	No	No	No	No	No	Yes			
120		160.00	US 395	Undev	12-20	<5500	Yes	>3.0	No	Marginal	>2.0	>2.0	Yes	V.P.	No	No	No	No	No	No	No	Yes			
692	Cando Tom	152.25	US 395	Undev	6.9	<5500	Yes	2.3	Yes	Marginal	>2.0	>2.0	No	Fair	No	No	No	No	No	No	M	Yes			
337	Jerry Moon	160.00	US 395	Undev	12-20	<5500	Yes	2.8	Marginal	Marginal	2.8	2.8	No	Fair	No	No	No	M	Yes	No	No	Yes			
135	Math Tom	160.00	US 395	Undev	12-20	<5500	Yes	2.8																	

LAND USE ASSESSMENT MATRIX

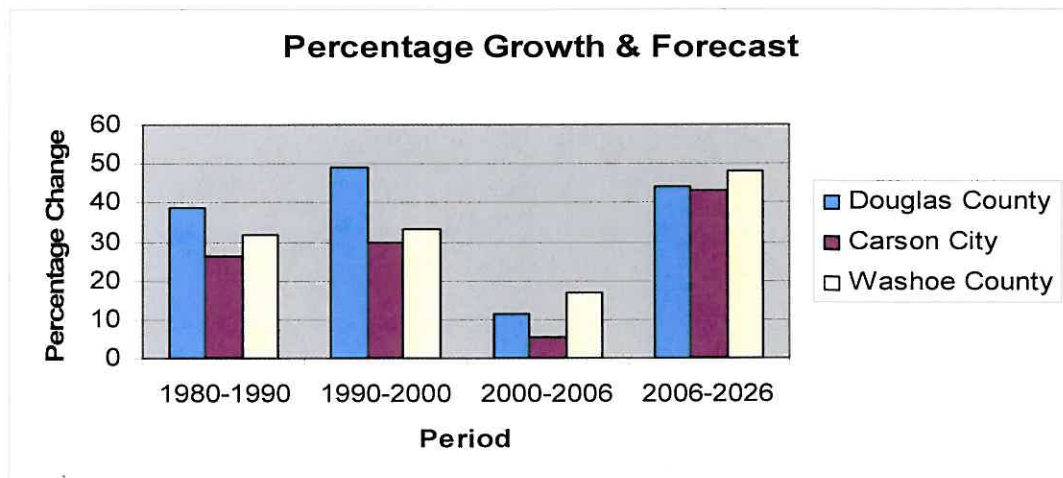
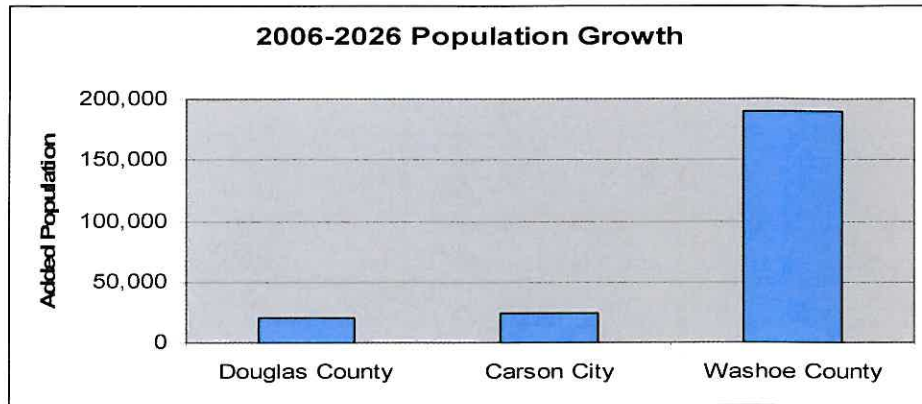
ALLOTMENT DATA					PHYSICAL CHARACTERISTICS										HIGHEST & BEST USE										NOTES
Allotment No.	Allotment Name	Size (acres)	Location	No. of Owners	Current Land Use	Topography		Accessibility		Public Services & Health & Safety	Cultural Res.	Natural Resources	Commercial Residential		Commercial Investment		Comm. Rec.	Other							
						Slope (%)	Altitude	Existing Road	Miles from paved road				Developable (yes/no)	High Density (subdivision)	Medium Density	Low Density (total)				Highway Right	Neighborhood Services	Light Industrial			
681	Nettee Wagon	150.00	US 395	Undev.	<500	Yes	1.6	Yes	Yes	>2.0	>2.0	Yes	Fair	No	No	No	No	No	Yes						
256	Sarah Wagon	150.00	US 395	Undev.	<500	Yes	1.6	Yes	Yes	>2.0	>2.0	No	Fair	No	No	No	No	No	Yes						
248	Jack Nye	120.00	US 395	Undev.	<500	Yes	1.6	Yes	Yes	>2.0	>2.0	No	Fair	No	No	No	No	No	Yes						
239	Long Dick	120.00	US 395	Undev.	<500	Yes	1.6	Yes	Yes	>2.0	>2.0	No	Fair	No	No	No	No	No	Yes						
219	Jane Or Turk	150.00	US 395	Undev.	<500	Yes	1.6	Yes	Yes	>2.0	>2.0	No	Fair	No	No	No	No	No	Yes						
253	Clark/Seel/Wa	150.00	US 395	Undev.	<500	Yes	1.6	Yes	Yes	>2.0	>2.0	No	Fair	No	No	No	No	No	Yes						
225	Jim John	120.00	US 395	House	<500	Yes	1.6	Yes	Yes	>2.0	>2.0	No	Fair	No	No	No	No	No	Yes						
200	Chaney Corl	150.00	US 395	Undev.	<500	Yes	1.6	Yes	Yes	>2.0	>2.0	No	Fair	No	No	No	No	No	Yes						
201	Steve Dyer	150.00	US 395	Undev.	<500	Yes	1.6	Yes	Yes	>2.0	>2.0	No	Fair	No	No	No	No	No	Yes						
214	Annie Henry	150.00	US 395	Undev.	<500	Yes	1.6	Yes	Yes	>2.0	>2.0	No	Fair	No	No	No	No	No	Yes						
293	Geo Watson	150.00	US 395	Undev.	<500	Yes	1.6	Yes	Yes	>2.0	>2.0	Yes	Fair	No	No	No	No	No	Yes						
294	Minnie Wagon	150.00	US 395	Undev.	<500	Yes	1.6	Yes	Yes	>2.0	>2.0	Yes	Fair	No	No	No	No	No	Yes						
295	Fred Watson	150.00	US 395	Undev.	<500	Yes	1.6	Yes	Yes	>2.0	>2.0	Yes	Fair	No	No	No	No	No	Yes						
279	Sa Bly	146.79	US 395	Undev.	<500	Yes	1.6	Yes	Yes	>2.0	>2.0	No	Fair	No	No	No	No	No	Yes						
278	Jim Bly	150.00	US 395	Undev.	<500	Yes	1.6	Yes	Yes	>2.0	>2.0	No	Fair	No	No	No	No	No	Yes						
251	Dick Jonan	155.89	US 395	Undev.	<500	Yes	1.6	Yes	Yes	>2.0	>2.0	No	Fair	No	No	No	No	No	Yes						
245	Bill Nye	150.00	US 395	Undev.	<500	Yes	1.6	Yes	Yes	>2.0	>2.0	No	Fair	No	No	No	No	No	Yes						
240	Susie Dick	150.00	US 395	Undev.	<500	Yes	1.6	Yes	Yes	>2.0	>2.0	No	Fair	No	No	No	No	No	Yes						
220	Luzie Jane	150.00	US 395	Undev.	<500	Yes	1.6	Yes	Yes	>2.0	>2.0	No	Fair	No	No	No	No	No	Yes						
254	Edith Ben	150.00	US 395	Undev.	<500	Yes	1.6	Yes	Yes	>2.0	>2.0	No	Fair	No	No	No	No	No	Yes						
206	Jim Walker	150.00	US 395	Undev.	<500	Yes	1.6	Yes	Yes	>2.0	>2.0	No	Fair	No	No	No	No	No	Yes						
206	Billy Duff	150.00	US 395	Undev.	<500	Yes	1.6	Yes	Yes	>2.0	>2.0	No	Fair	No	No	No	No	No	Yes						
287	Lady Johned	120.00	US 395	Undev.	<500	Yes	1.6	Yes	Yes	>2.0	>2.0	No	Fair	No	No	No	No	No	Yes						
205	Susie Ming	150.00	US 395	Undev.	<500	Yes	1.6	Yes	Yes	>2.0	>2.0	No	Fair	No	No	No	No	No	Yes						
202	Clay Jim or	150.00	US 395	Undev.	<500	Yes	1.6	Yes	Yes	>2.0	>2.0	No	Fair	No	No	No	No	No	Yes						
203	Susie Jim or	150.00	US 395	Undev.	<500	Yes	1.6	Yes	Yes	>2.0	>2.0	No	Fair	No	No	No	No	No	Yes						
215	Blue Maria	118.91	US 395	Undev.	<500	Yes	1.6	Yes	Yes	>2.0	>2.0	Marginal	Fair	No	No	No	No	No	Yes						
216	Maggie Mier	150.00	US 395	Undev.	<500	Yes	1.6	Yes	Yes	>2.0	>2.0	Yes	Fair	No	No	No	No	No	Yes						
217	Lori Lash	150.00	US 395	Undev.	<500	Yes	1.6	Yes	Yes	>2.0	>2.0	Yes	Fair	No	No	No	No	No	Yes						
280	Molly Jonan	150.00	US 395	Undev.	<500	Yes	1.6	Yes	Yes	>2.0	>2.0	Marginal	Fair	No	No	No	No	No	Yes						
246	Maggie Nye	120.00	US 395	Undev.	<500	Yes	1.6	Yes	Yes	>2.0	>2.0	No	Fair	No	No	No	No	No	Yes						
241	Aggie Dick	150.00	US 395	Undev.	<500	Yes	1.6	Yes	Yes	>2.0	>2.0	No	Fair	No	No	No	No	No	Yes						
221	Sam Jake	150.00	US 395	Undev.	<500	Yes	1.6	Yes	Yes	>2.0	>2.0	No	Fair	No	No	No	No	No	Yes						
206	Mah-Hut Ch	150.00	US 395	Undev.	<500	Yes	1.6	Yes	Yes	>2.0	>2.0	Marginal	Fair	No	No	No	No	No	Yes						
206	Billy Corrine	150.00	US 395	Undev.	<500	Yes	1.6	Yes	Yes	>2.0	>2.0	Marginal	Fair	No	No	No	No	No	Yes						
211	Ethan or Ph	120.00	US 395	Undev.	<500	Yes	1.6	Yes	Yes	>2.0	>2.0	Marginal	Fair	No	No	No	No	No	Yes						
207	Low-Dom-A	150.00	US 395	Undev.	<500	Yes	1.6	Yes	Yes	>2.0	>2.0	No	Fair	No	No	No	No	No	Yes						
204	La Ga Ga	150.00	US 395	Undev.	<500	Yes	1.6	Yes	Yes	>2.0	>2.0	No	Fair	No	No	No	No	No	Yes						
257	Charley Bha	150.00	US 395	Undev.	<500	Yes	1.6	Yes	Yes	>2.0	>2.0	No	Fair	No	No	No	No	No	Yes						
238	Luzie Glue	120.00	US 395	Undev.	<500	Yes	1.6	Yes	Yes	>2.0	>2.0	Marginal	Fair	No	No	No	No	No	Yes						
285	Charley New	150.13	US 395	Undev.	<500	Yes	1.6	Yes	Yes	>2.0	>2.0	Yes	Fair	No	No	No	No	No	Yes						
286	Annie Lewis	150.00	US 395	Undev.	<500	Yes	1.6	Yes	Yes	>2.0	>2.0	Yes	Fair	No	No	No	No	No	Yes						
242	Blair M. Ben	150.00	US 395	Undev.	<500	Yes	1.6	Yes	Yes	>2.0	>2.0	Yes	Fair	No	No	No	No	No	Yes						
222	Nancy Jane	150.00	US 395	Undev.	<500	Yes	1.6	Yes	Yes	>2.0	>2.0	No	Fair	No	No	No	No	No	Yes						
267	Kitty Dressad	150.00	US 395	Undev.	<500	Yes	1.6	Yes	Yes	>2.0	>2.0	Yes	Fair	No	No	No	No	No	Yes						
290	Mary Corbin	150.00	US 395	Undev.	<500	Yes	1.6	Yes	Yes	>2.0	>2.0	Yes	Fair	No	No	No	No	No	Yes						
291	Ben James	150.00	US 395	Undev.	<500	Yes	1.6	Yes	Yes	>2.0	>2.0	Yes	Fair	No	No	No	No	No	Yes						
208	Susie Hobd	120.00	US 395	Undev.	<500	Yes	1.6	Yes	Yes	>2.0	>2.0	Marginal	Fair	No	No	No	No	No	Yes						
260	Mame Shaw	150.00	US 395	Undev.	<500	Yes	1.6	Yes	Yes	>2.0	>2.0	Marginal	Fair	No	No	No	No	No	Yes						
305	Archie-Jun A	151.43	US 395	Undev.	<500	Yes	1.6	Yes	Yes	>2.0	>2.0	Yes	Fair	No	No	No	No	No	Yes						
306	Maggie Geo	150.00	US 395	Undev.	<500	Yes	1.6	Yes	Yes	>2.0	>2.0	Yes	Fair	No	No	No	No	No	Yes						
243	John Dick	150.00	US 395	Undev.	<500	Yes	1.6	Yes	Yes	>2.0	>2.0	No	Fair	No	No	No	No	No	Yes						
223	Judy Jane	150.00	US 395	Undev.	<500	Yes	1.6	Yes	Yes	>2.0	>2.0	No	Fair	No	No	No	No	No	Yes						
268	Ordy Dressad	150.00	US 395	Undev.	<500	Yes	1.6	Yes	Yes	>2.0	>2.0	Yes	Fair	No	No	No	No	No	Yes						
300	Ed Corrine	150.00	US 395	Undev.	<500	Yes	1.6	Yes	Yes	>2.0	>2.0	Yes	Fair	No	No	No	No	No	Yes						
292	Maggie Jam	150.00	US 395	Undev.	<500	Yes	1.6	Yes	Yes	>2.0	>2.0	Yes	Fair	No	No	No	No	No	Yes						
209	Dick Dick-Mt	150.00	US 395	Undev.	<500	Yes	1.6	Yes	Yes	>2.0	>2.0	Marginal	Fair	No	No	No	No	No	Yes						
244	Jennie Dick	124.74	US 395	Undev.	<500	Yes	1.6	Yes	Yes	>2.0	>2.0	No	Fair	No	No	No	No	No	Yes						
224	Liddle Jane	151.00	US 395	Undev.	<500	Yes	1.6	Yes	Yes	>2.0	>2.0	Yes	Fair	No	No	No	No	No	Yes						
261	George or Y	150.71	US 395	Undev.	<500	Yes	1.6	Yes	Yes	>2.0	>2.0	Yes	Fair	No	No	No	No	No	Yes						
301	McCarthy Geo	150.09	US 395	Undev.	<500	Yes	1.6	Yes	Yes	>2.0	>2.0	Yes	Fair	No	No	No	No	No	Yes						
474	Mah-Homa I	150.60	US 395	Undev.	<500	Yes	1.6	Yes	Yes	>2.0	>2.0	Yes	Fair	No	No	No	No	No	Yes						
210	Jane Dick	150.20	US 395	Undev.	<500	Yes	1.6	Yes	Yes	>2.0	>2.0	Yes	Fair	No	No	No	No	No	Yes						
283	Jackie Geo	115.33	US 395	Undev.	<500	Yes	1.6	Yes	Yes	>2.0	>2.0	Yes	Fair	No	No	No	No	No	Yes						
282	Gern Geo	150.00	US 395	Undev.	<500	Yes	1.6	Yes	Yes	>2.0	>2.0	Yes	Fair	No	No	No	No	No	Yes						
475	Annie Geo	150.00	US 395	Undev.	<500	Yes	1.6	Yes	Yes	>2.0	>2.0	Yes	Fair	No	No	No	No	No	Yes						
687	Messie Lute	150.00	US 395	Undev.	<500	Yes	1.6	Yes	Yes	>2.0	>2.0	Yes	Fair	No	No	No	No	No	Yes						
284	Sam Twent	156.12	US 395	Undev.	<500	Yes	1.6	Yes	Yes	>2.0	>2.0	Yes	Fair	No	No	No	No	No	Yes						
689	Neene Lute	150.00	US 395	Undev.	<500	Yes	1.6	Yes	Yes	>2.0	>2.0	Yes	Fair	No	No	No	No	No	Yes						
688	Jack Columb	150.00	US 395	Undev.	<500	Yes	1.6	Yes	Yes	>2.0	>2.0	Yes	Fair	No	No	No	No	No	Yes						
734	Silver Mt. Jk	150.00	US 395	Undev.																					

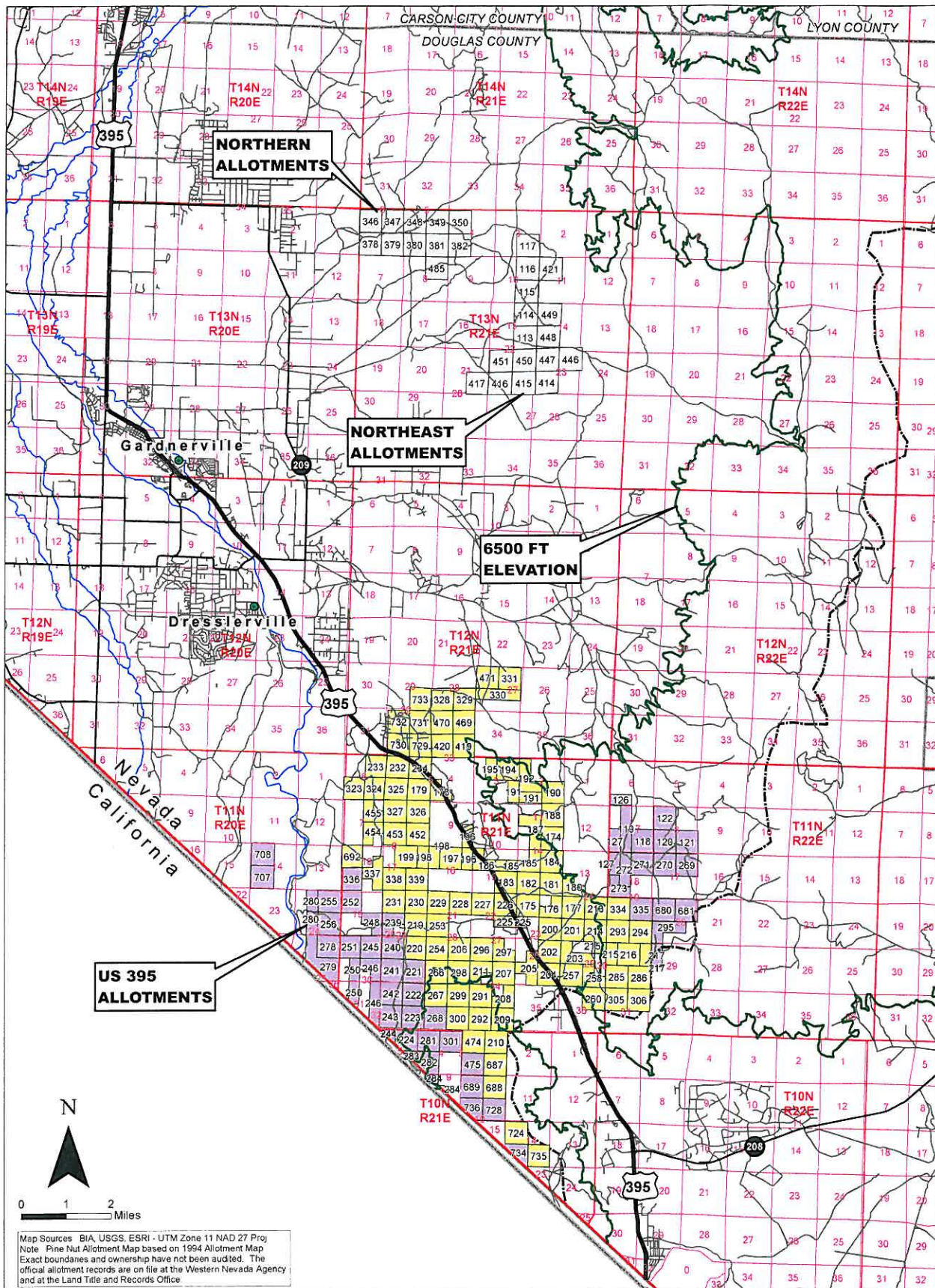


Overall Suitability

Pine Nut Allotments, Douglas County, Nevada

Map Prepared by Cascade Design Professionals, Inc., Sept. 2008

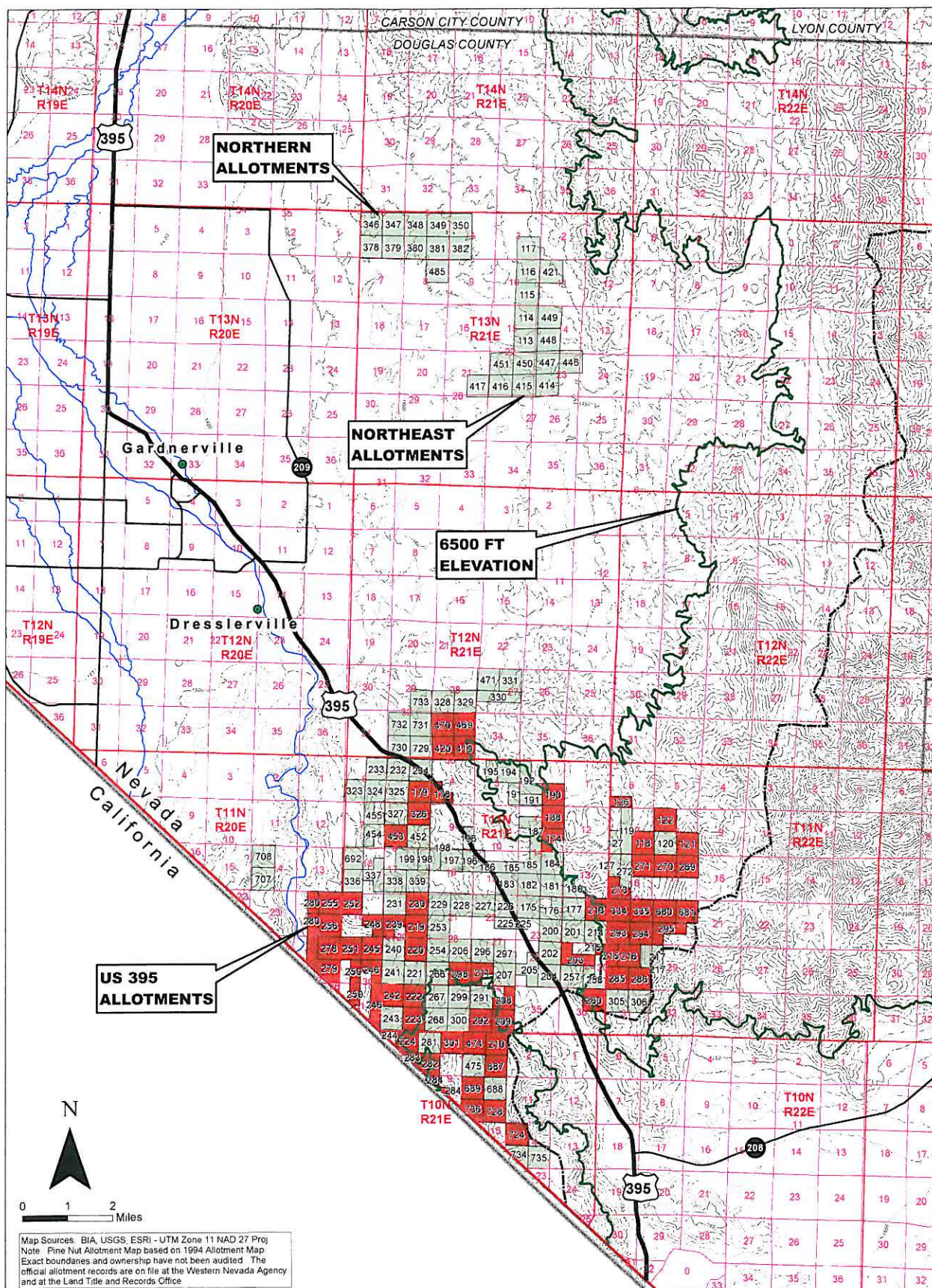




Allotments Within Approximately 2 Miles of US 395

Pine Nut Allotments, Douglas County, Nevada

Map Prepared by Cascade Design Professionals, Inc., Sept 2008

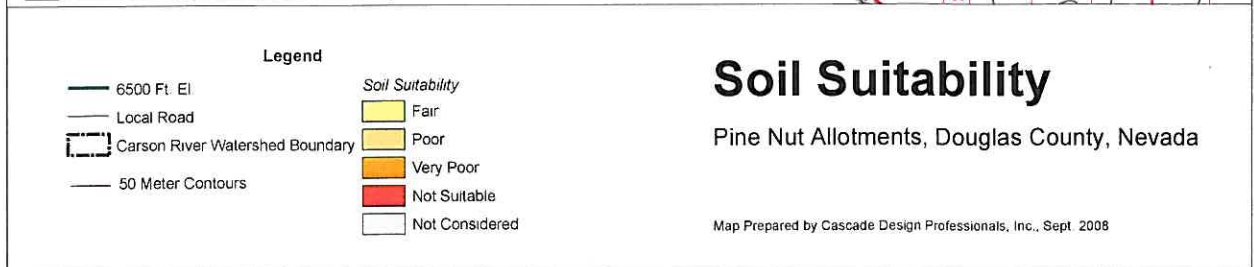
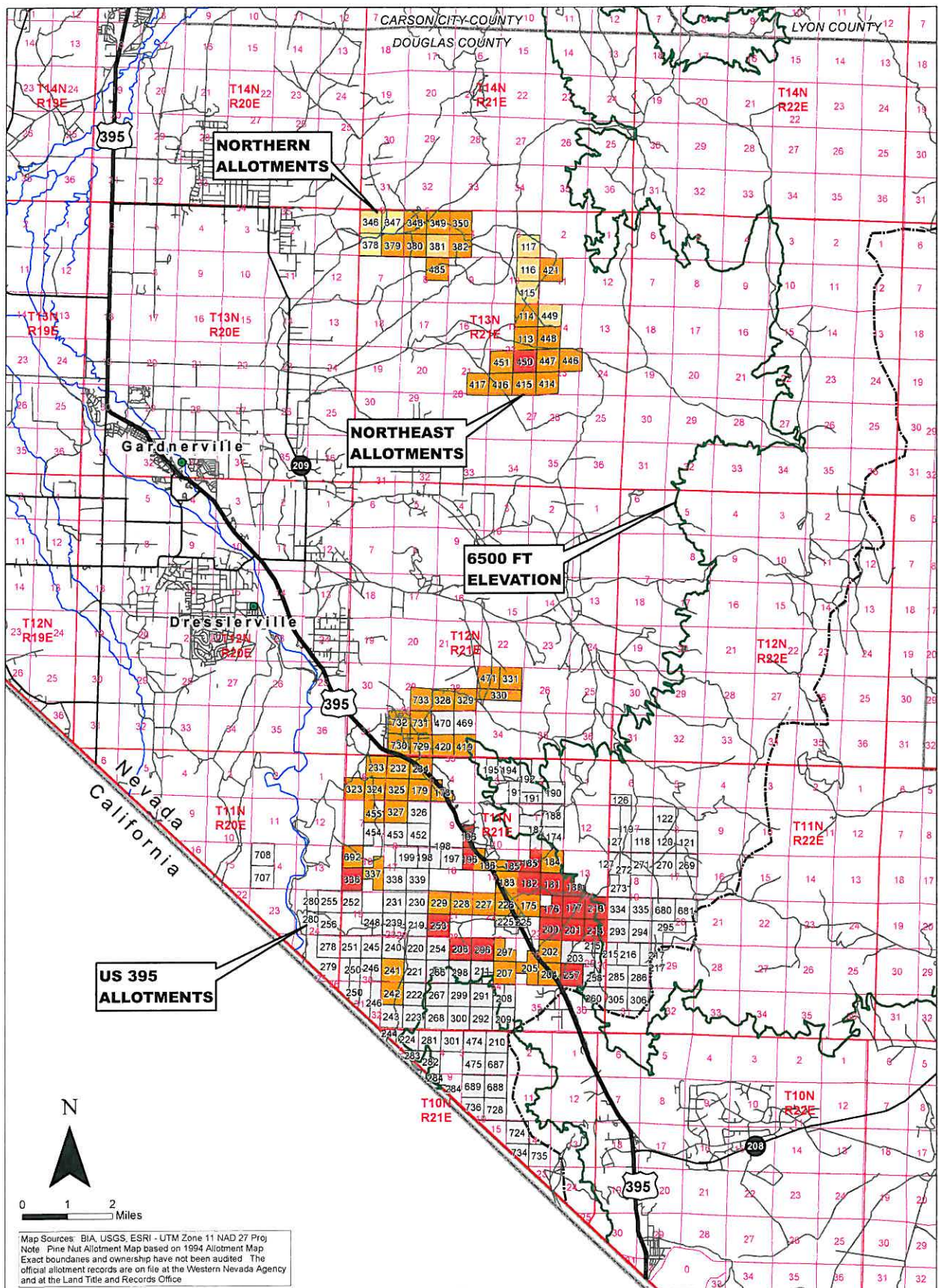


- Legend**
- Carson River Watershed Boundary
 - 6500 Ft. El.
 - Over 20% Slope
 - Below 20% Slope
 - 50 Meter Contours

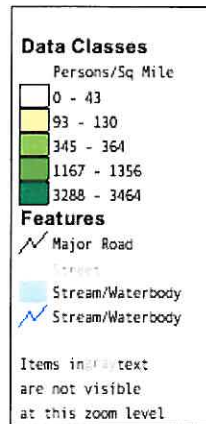
Allotment Suitability By Slope

Pine Nut Allotments, Douglas County, Nevada

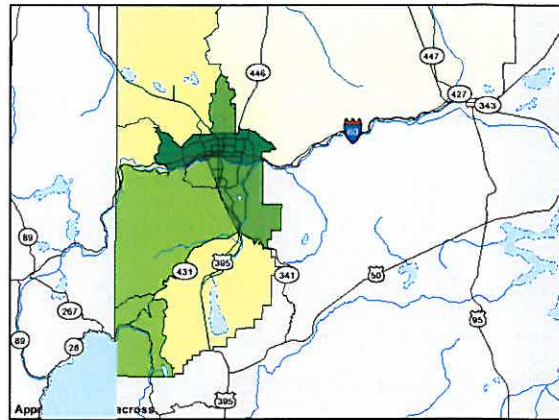
Map Prepared by Cascade Design Professionals, Inc., Sept. 2008



Legend

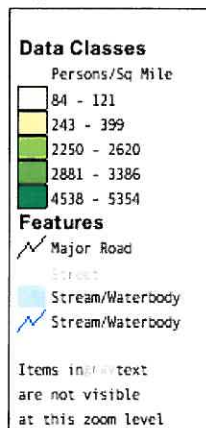


Southern Washoe County

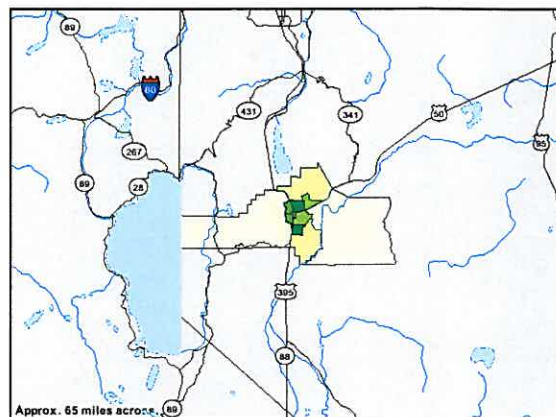


Areas show regional subdivision

Legend

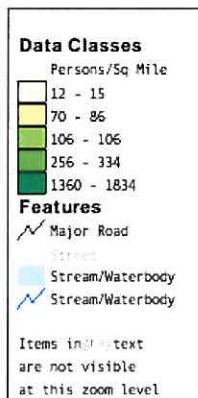


Carson City

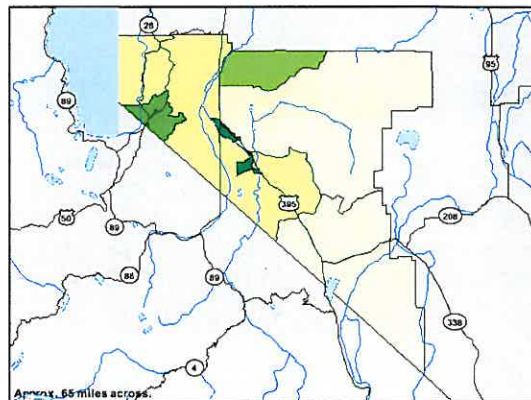


Areas show Census Tracts

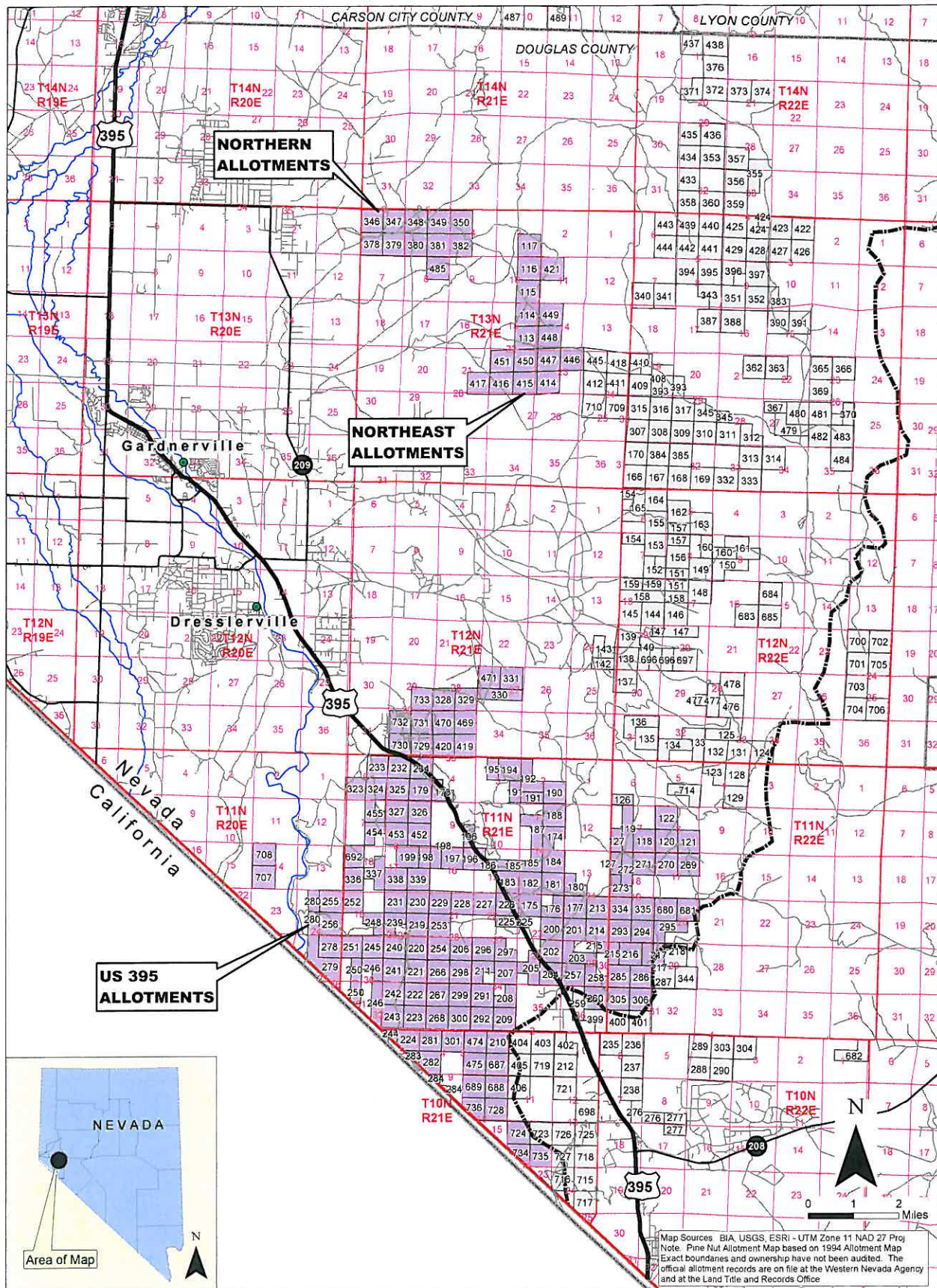
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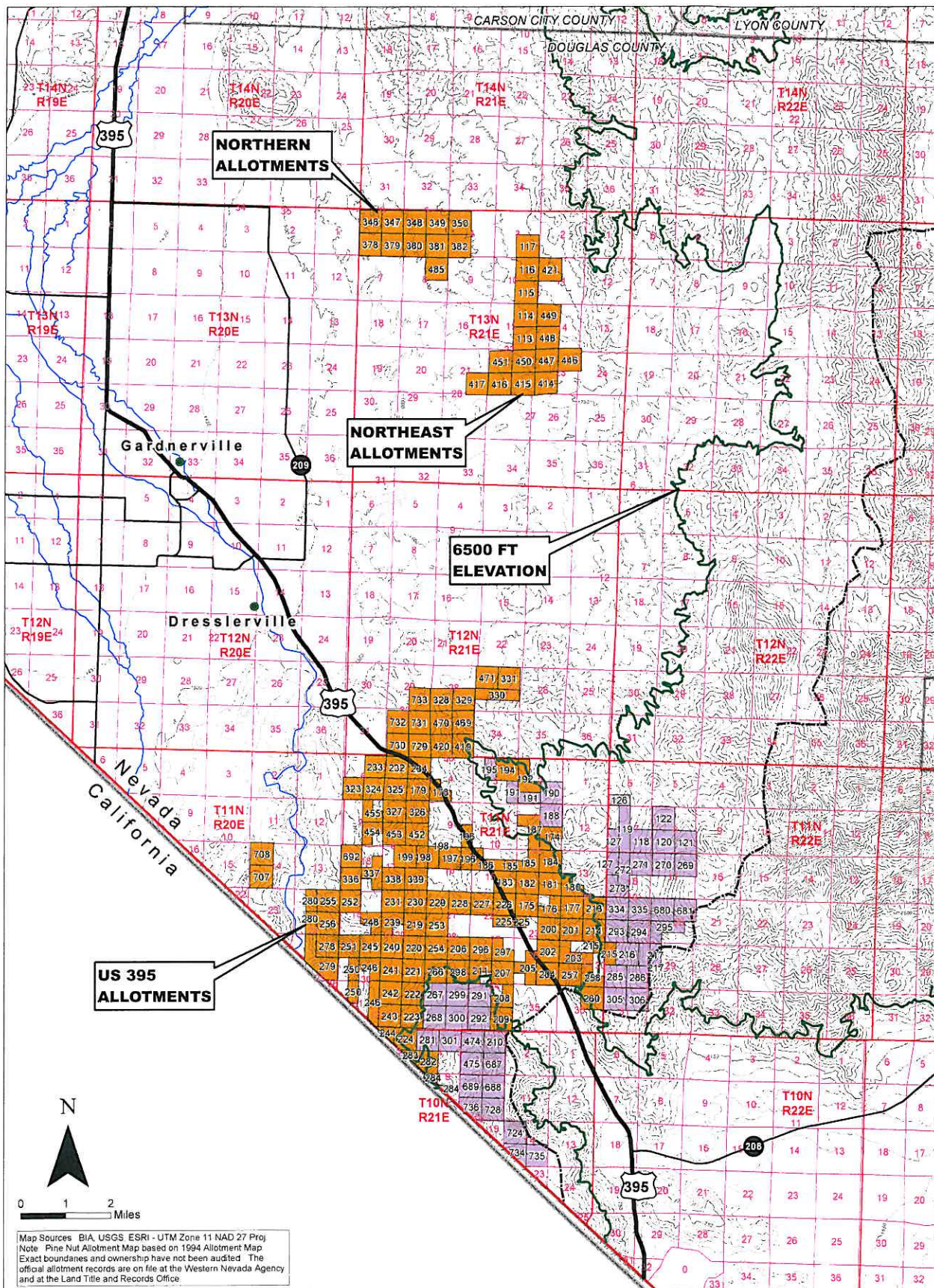


Douglas County



Areas show Census Tracts





Allotments Below 6500 Ft. Elevation

Pine Nut Allotments, Douglas County, Nevada

Map Prepared by Cascade Design Professionals, Inc., Sept. 2008

Pine Nut Allotments (NV)

Land Use and Development Plan

Community Meetings, September 2008



Purpose of the Project

Develop guidelines for BIA decision-making when reviewing commercial development proposals from individual Indian landowners and potential lessees

- Identify "highest and best use" for the allotments, considering economic, environmental, and cultural impacts
- Recommend building and operating standards
- Recommend lease structures



Note to Allotment Owners

This Plan does not and will not preclude personal development projects on Allotments.

It pertains only to those commercial developments involving leasing structures, and provides the BIA with guidelines for approval of those development projects.

Consultant Scope of Work

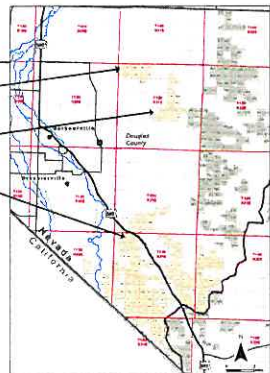
TASKS

- 1 Develop Use Designations
- 2 Prepare Impact Analysis
- 3 Prepare Standards Recommendations
- 4 Prepare Lease Recommendations
- 5 Prepare Final Plan

Study Area

- Northern Allotments
- Northeast Allotments
- Hwy 395 Allotments

Allotments shown in dark shade are not a part of this study.



What did we look at?

■ Elevation

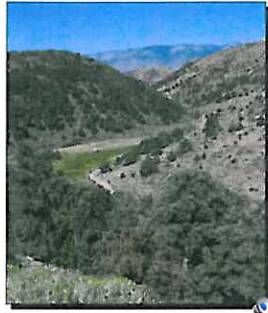
- Less than 5800' – Good for development
- 5800'-6500' – Extreme weather and difficult access
- Over 6500' – too difficult and too costly for commercial development



What did we look at?

■ Slope

- 0%-9% - good to fair for development
- 9%-20% - difficult to develop
- Over 20% - too difficult and too costly to develop



What did we look at?

■ Access

- Desirable for development
 - Parcels adjacent to or within two miles of a developed road
 - Parcels near existing growth and infrastructure
- Undesirable for development
 - No existing roads
 - Too far from existing development



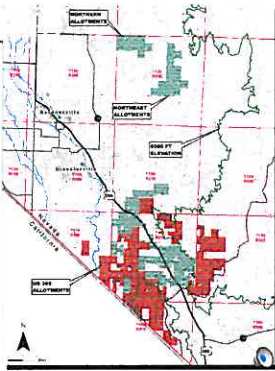
What We Found Out

■ Northern and Northeast Allotments

- All 27 allotments are suitable for development

■ Highway 395 Allotments

- 56 Allotments are suitable or marginally suitable for development
- The most accessible sites lie adjacent to Highway 395 on relatively level ground.



We looked at Public Utilities

■ Power

■ Groundwater

- Availability
- Future Potential
- Quality

■ Sewage Treatment & Disposal



We looked at Groundwater

■ Availability

- Groundwater is probably available in the short term
- Low probability in steeper areas east of Hwy 395

■ Sustainability

- Future supply is questionable

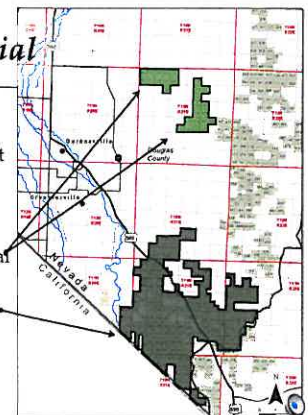
■ Quality

- All sites may need treatment for sulfate, iron, arsenic, or manganese



Water Potential

- Extension of existing public systems is not viable - Development will have to rely on groundwater
- Marginal water development potential
- Very Low to No potential



We looked at Soils

- Soils in most allotments are not the best for major development
- Highway 395 corridor has less desirable soil conditions
- Poor soil suitability means higher development costs



Highest & Best Use

■ Northern & Northeast Allotments

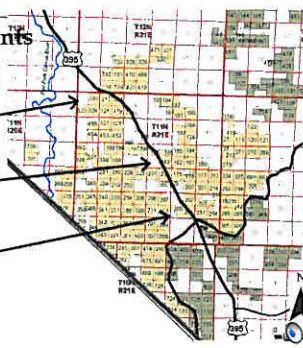
Larger-scale, planned developments such as residential subdivisions or self-contained retirement or resort communities



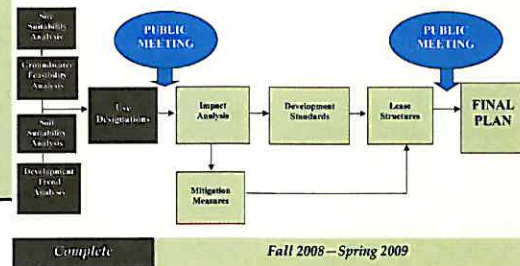
Highest & Best Use

■ Hwy 395 Allotments

- Single-family residential developments or small subdivisions
- Single-family residential development
- Horse ranches or other "lifestyle" homesites



Next Steps



Display Areas

Visit the Display area to find your parcel in the Log Book

The consultant team and BIA personnel are here to answer your questions.

ALLOTMENT NUMBER	xxx
Allotment Name	160
Size (acres)	NE
Location	27
No. of Owners	Undev
Current Land Use	
PHYSICAL CHARACTERISTICS	
Topography	
Slope (%)	6-9
Altitude (feet)	<5000
Accessibility	
Existing Road	Yes
Miles from paved road	7.5
Developable (yes/no)	Yes
Public Services & Health & Safety	
Sewage Treatment	Yes
Proximity to Power (miles)	3.5
Proximity to Communications (miles)	3.5
Cultural Resources	
Proven Forest (quality pine nut resource)	No
Natural Resources	
Groundwater Potential	Fair
Identified Mineral Resources	No
HIGHEST AND BEST USE	
Commercial Residential	
High Density (subdivision)	Marginal
Medium Density	Yes
Low Density (rural)	Yes
Commercial Investment	No
Highway Retail	Marginal
Neighborhood Services	No
Light Industrial	No

Visit Displays & Ask Questions

Land Use Suitability
Dennis Petrequin
John Nelson

Land Use Designations & Market Assessment
Lee Smith

Groundwater Supply and Feasibility
Jeff Barry

Grazing Leases
David Smith (BIA)

General Questions
Mary Bedard Herb Fricke

What Do You Think?

Please fill out and leave the comment sheet found in your handout.

Thank you for your comments

 Bureau of Ocean Energy Management, Regulation and Assessment Comments	PUBLIC MEETING SEPTMBER 10, 2014
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Is your attendance motivated by this issue? ☐ Yes ☐ No

If yes, what group is it? ☐ Youthful ☐ Middle-aged ☐ Elderly

What is your degree of interest? ☐ High ☐ Medium ☐ Low

Do you or any future owners of your attendance have any future plans for leaving all or part of your attendance for residential, commercial, or industrial use?

☐ Yes

If yes, what type? ☐ _____

☐ No

How important is it to establish development standards through the BLM to ensure present or potential future attendance from the community on any upcoming planning?

☐ Very important ☐ Somewhat important ☐ Not important

What type of development is on your attendance?

☐ A home (the attendance owner)

☐ Corporate facility (an attendance owner)

☐ Residential/development

☐ Commercial

☐ Light industrial

☐ Medium industrial

☐ Other ☐ _____

Any other comments:

Land Use and Development Plan Pine Nut Allotments (NV)

SEPTEMBER 24-25, 2008

What is the Pine Nut Allotments Land Use and Development Plan?

The Pine Nut Allotments Land Use and Development Plan will assist the Bureau of Indian Affairs in making decisions regarding revenue producing development proposals that will require land leases on allotments.

The plan pertains only to developments that involve leasing structures. It does not and will not preclude personal development projects on allotments.

A consultant team, hired by the BIA to prepare the plan for the selected allotments shown on the map, will:

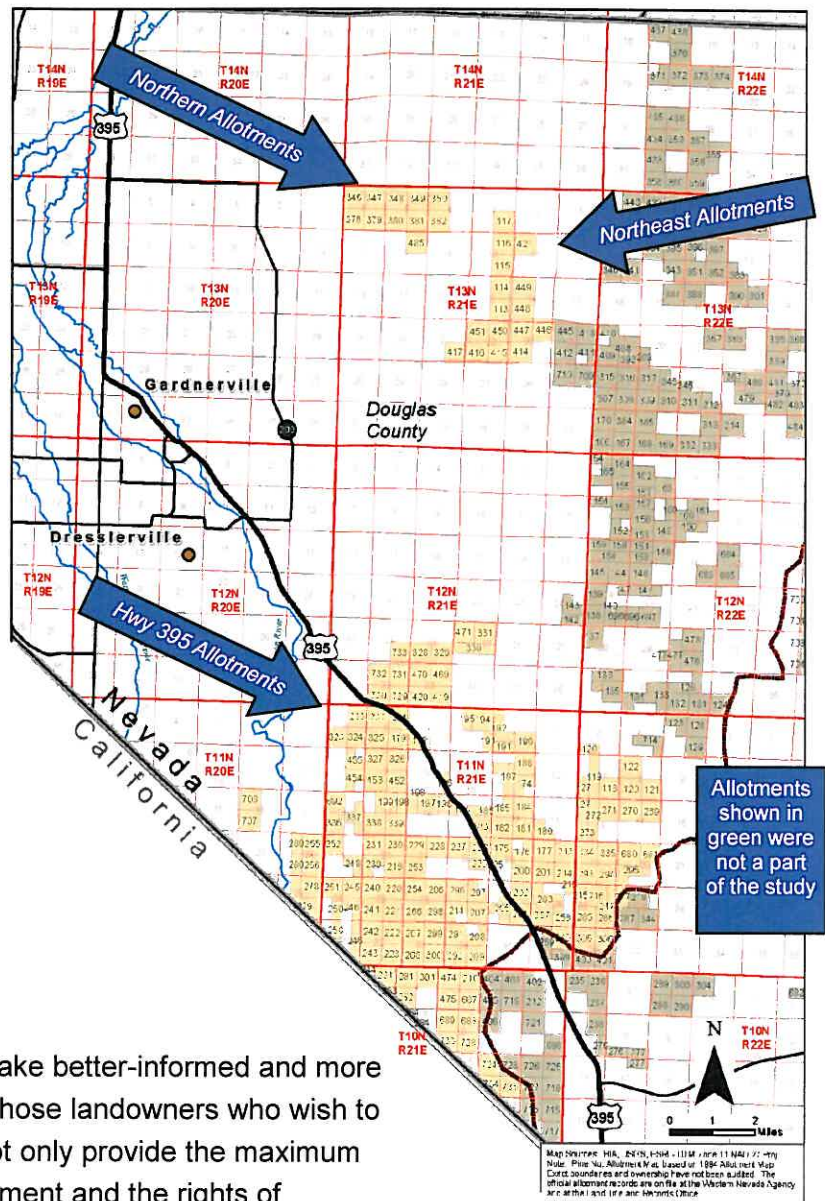
- Identify the "highest and best" use for allotments to show which parcels have development potential
- Recommend lease provisions that would limit the negative impacts of development and ensure that certain building standards are met
- Recommend lease provisions that would provide the best economic return to landowners


The Plan will enable the BIA and landowners to make better-informed and more consistent decisions about the land. In so doing, those landowners who wish to develop should be able to negotiate leases that not only provide the maximum economic benefit, but also ensure that the environment and the rights of surrounding landowners are adequately protected.

What is the purpose of this meeting?

At tonight's meeting, you can learn what we have found out so far in the planning process, and where we go from here. Talk to representatives of the BIA and the consultant team about the findings and get answers to your questions. If you want to find information on your individual parcel, you can look it up in the Allotment Databook provided in the display area.

Before you leave, please fill out the enclosed form and give us your comments on the planning effort.



	Bureau of Indian Affairs Western Regional Office Pine Nut Allotments Land Use and Development Plan	PUBLIC MEETING
	<h1>Comments</h1>	SEPTEMBER 24-25, 2008

Is your allotment included in this study? ☐ Yes ☐ No

If yes, what group is it in? ☐ Northern ☐ Northeast ☐ Hwy 395

What is your allotment number? _____

Do you or any fellow owners of your allotment have any future plans for leasing all or part of your allotment for residential, commercial, or industrial uses?

☐ Yes

If yes, what type? _____

☐ No

How important is it to establish development standards through the BIA leasing process to protect your allotment from development on a neighboring allotment?

☐ Very Important ☐ Somewhat Important ☐ Not Important

What type of development is on your allotment?

☐ 1 home (for allotment owner)

☐ 2 or more homes (for allotment owners)

☐ Residential Subdivision

☐ Commercial

☐ Light Industrial

☐ Undeveloped

☐ Other _____

Any other comments?

APPENDIX C

LAND USE SUITABILITY ANALYSIS

WORKING PAPER

Pine Nut Allotments (NV) Land Use and Development Procedural Plan

Land Use Suitability Analysis

Objective

The objective of this analysis is to determine, based on physical characteristics, which Pine Nut Allotments included in this study would be suitable for major development and how they would rank from the standpoint of developers interested in entering into long-term lease agreements with allotment owners.

Study Area

This study includes 176 allotments in three clusters. For reference purposes, these three clusters are referred to as the North Allotments (north-northeast of the Minden/Gardnerville urban area and east of the Minden-Tahoe Airport), Northeast Allotments (east and slightly to the south of the North Allotments), and the US 395 Allotments (southeast of Minden/Gardnerville urban area along the US 395 corridor). See Figure 1.

The North Allotments include 10 contiguous allotments. They are in an area of flat to rolling terrain and are accessed by various earth roads. These allotments are also near a developing rural residential area to the west. The Northeast Allotments include 16 allotments and are also characterized by flat to rolling terrain. Elevations in both of these areas are less than 5800 feet.

The US 395 Allotments total 150. These allotments are mostly along the US 395 highway corridor in the Pine Nut Mountain Range which is very rugged, and elevations exceed 8000 feet in many areas. US 395 climbs to around 6000 feet within this highway corridor. Many of these allotments are in areas of steep slopes, and many do not have access or are too far from the highway to be of interest to developers.

Criteria

Basic criteria for development suitability include the following physical factors:

- Topography
 - Slope
 - Elevation
- Access
 - Distance from existing road network
 - Access via an existing road

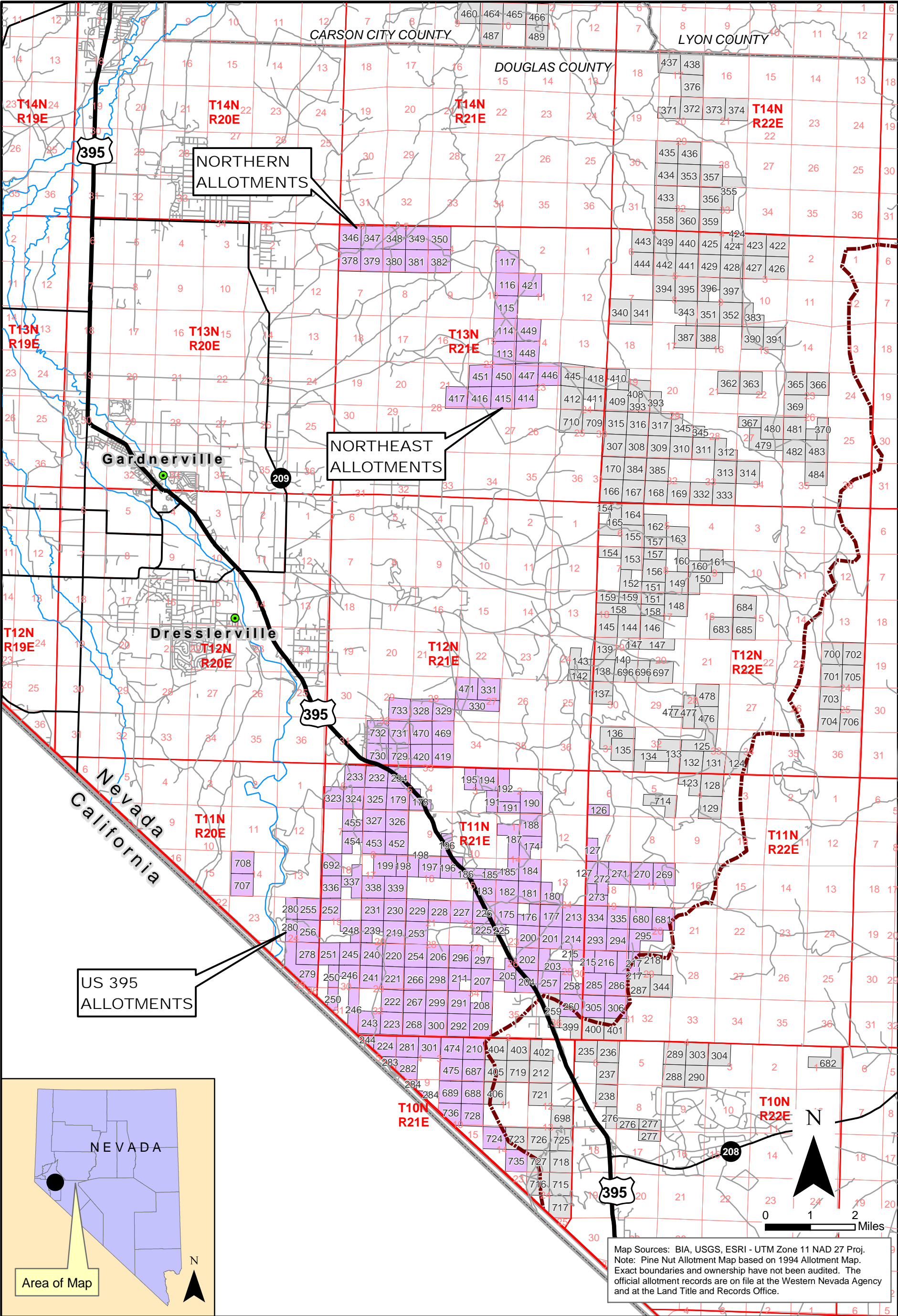


Figure 1

Study Area

Pine Nut Allotments, Douglas County, Nevada

Map Prepared by Cascade Design Professionals, Inc., Jan. 2009

Legend

- Carson River Watershed Boundary
- Allotment Included in Master Land Use Plan
- Allotment Not Included in Master Plan
- Local Road
- 50 Meter Contours

- Public Services
 - Proximity to power and communications
 - Groundwater potential
 - Ability to provide sewage collection and/or treatment
- Soils
 - Building site development suitability
 - Construction materials
 - Land management
 - Recreational development
 - Sanitary facilities
- Ownership
 - Number of allotment owners

Development suitability criteria and corresponding development ratings are summarized in Table 1 and discussed in detail in the sections that follow.

Table 1 Development Suitability Criteria		
Physical Characteristic	Criterion	Suitability Rating
Topography		
Slope	0-6%	Good
	6-9%	Fair
	9-12%	Poor
	12-20%	Very Poor
	Above 20%	Not Developable
Elevation	Less than 5800 ft.	Good
	5800-6500 ft.	Fair
	Greater than 6500 ft.	Not Developable
Access		
US 395 Allotments		
Distance to Paved Road	Adjacent to Paved Road	Good
	Less than 2 miles	Fair
	More than 2 miles	Not Developable
Existing Access Road	Yes	Good
	No	Not Developable
North & Northeast Allotments		
Distance to Paved Road	Adjacent to Paved Road	Good
	Less than 2 miles	Good
	More than 2 miles	Fair
Existing Access Road	Yes	Good
	No	Fair
Public Services		
Power & Communications	Less than 2 miles	Good
	More than 2 miles	Marginal
Accessibility to Groundwater	Less than 5200 ft. Elev.	Fair
	5200-6500 ft. Elev.	Marginal
	Above 6500 ft. Elev.	Very Poor
Suitability for Sewage Treatment	0-6% slope	Good
	6-9% slope	Fair

Table 1 Development Suitability Criteria		
	9-12% slope	Poor
	12-20% slope	Very Poor
	Above 20% slope	Not Feasible
Soils Suitability for Development		
Building Site Development Suitability	Corrosion of Concrete	All criterion rated as follows: Good Fair Poor Very Poor Not Suitable
	Lawns & Landscaping	
	Golf Fairways	
	Local Roads & Streets	
	Shallow Excavations	
	Dwellings & Small Commercial Buildings	
Construction Materials	Sources of Gravel	
	Sources of Roadfill	
	Source of Sand	
	Source of Topsoil	
Land Management	Off Trail & Road Erosion Hazard	
	On Trail & Road Erosion Hazard	
	Suitability for Roads	
Recreational Development	Camp Areas, Picnic Areas, Playgrounds	
	Paths Trails, & Motorcycle Trails	
Sanitary Facilities	Suitable for Septic Tank Absorption Fields	
	Suitability for Sewage Lagoons	
Ownership		
Number of Allotment Owners	0-5	Good
	6-15	Fair
	16-30	Marginal
	31-50	Poor
	>50	Very Poor

Topography

Both elevation and slope are critical factors to developers. Level land is the most economical to develop. As slopes become steeper, costs increase because of the amount of earthwork that becomes necessary to construct roads, utilities, and pads for buildings.

Slope categories were established as follows and are shown on Figure 2:

- 0-6% Good Suitability. This situation is essentially level land that requires minimal earthwork to construct roads, utilities and prepare pads for housing. This is the most economical land to develop and is the most attractive to developers for both large and small scale developments.
- 6-9% Fair Suitability. Cost for infrastructure and housing pads increase with slope, but development capability is still good in this situation and would be attractive to developers.
- 9-12% Poor Suitability. Costs for infrastructure increase significantly as more earthwork is required for site preparation. Development is still possible, but is less attractive to developers.
- 12-20% Very Poor Suitability. Infrastructure costs become extreme. Road slopes become excessive as 12% is considered a maximum allowable slope. Also, sewage disposal systems become more

difficult and expensive. Small scale development is still possible, but high costs make this situation the least desirable to developers.

- Over 20% Non-developable. Anything over 20% slope becomes too expensive to develop and will not be of interest to developers. Cutting in roads and housing pads involves excessive earthwork, and earth stability and slides can become a major hazard. Also, sewage disposal options become limited and very costly.

Elevation is also a factor to consider in this area. The higher the elevation the greater the snowfall and the longer the snow season. As the amount of snowfall increases, with associated drifting problems, the more problems occur with snow removal to maintain access. Snow removal also has a direct cost impact on the homeowner. As a result, higher elevations are not attractive to developers or to prospective homebuyers.

Based on discussions with BIA personnel at the Western Nevada Agency who are very familiar with the area and with weather patterns, it was determined that any areas above 6500 feet would be undesirable from a developer's standpoint. In the area along US 395, the 6500-foot level also generally coincides with excessive slopes. Figure 3 shows those allotments where elevation becomes a problem.

BIA natural resources personnel also pointed out that the best pine nut resource areas generally begin at the 6500-foot elevation. In addition, the distance to reach groundwater increases as does cost to develop the source.

As a result of these factors, any allotments at or above the 6500-foot elevation were considered non-developable. This criterion only affects the allotments along US 395. The North and Northeast allotments are all well under this elevation.

Access

Access is also a critical issue in this situation. From a developer's standpoint, the most desirable areas to develop are those that have or are adjacent to existing roads, particularly improved roads. The further away from an existing public road, the higher the development cost. For example, a 26-foot wide, paved local road (20-foot travelway with 3-foot shoulders) costs around \$700,000 a mile on level or rolling terrain and around \$800,000 in mountainous areas. As a result, allotments that do not have proximity to existing roads, particularly improved public roads, become more costly to develop and are less attractive to developers.

Another factor comes into play with allotted lands. If there is no public road providing existing access to an allotment, the problem of securing an easement through another allotment or allotments can become a major problem because of the fractionated ownerships of the allotments. Instead of dealing with one owner, a developer will need to deal with multiple owners. This prospect is not likely to be attractive to potential developers.

Proximity to an existing road is a particular problem in the US 395 area as there are few public roads, and for all practical purposes, US 395 is the only paved access. As a result, those allotments, with only a few exceptions, that are more than two driving miles from US 395 are considered to be undesirable from a developer's standpoint because of increased cost for access. Figure 4 shows those allotments within two miles of U.S. 395.

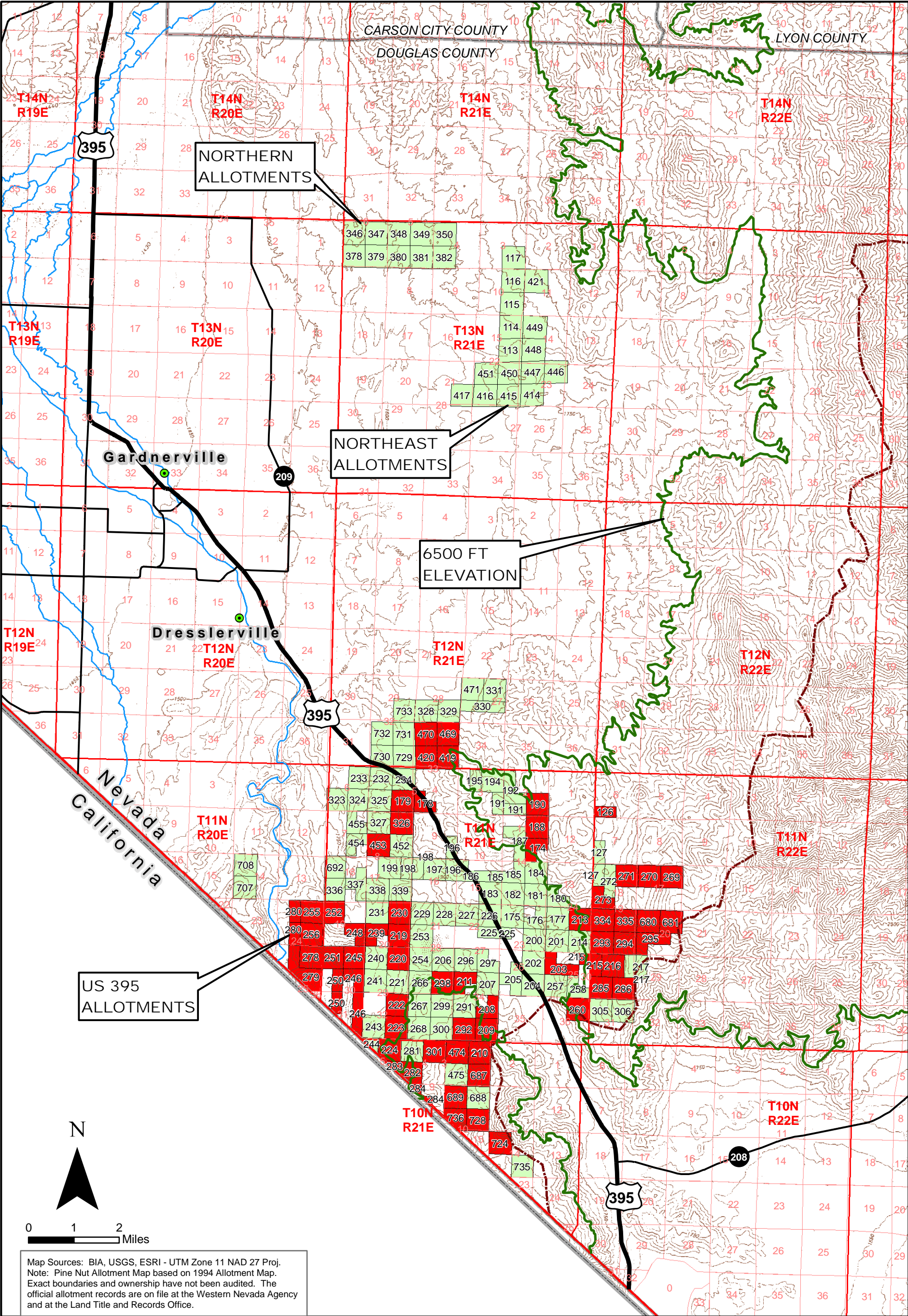


Figure 2

Allotment Suitability By Slope

Pine Nut Allotments, Douglas County, Nevada

Map Prepared by Cascade Design Professionals, Inc., Jan. 2009

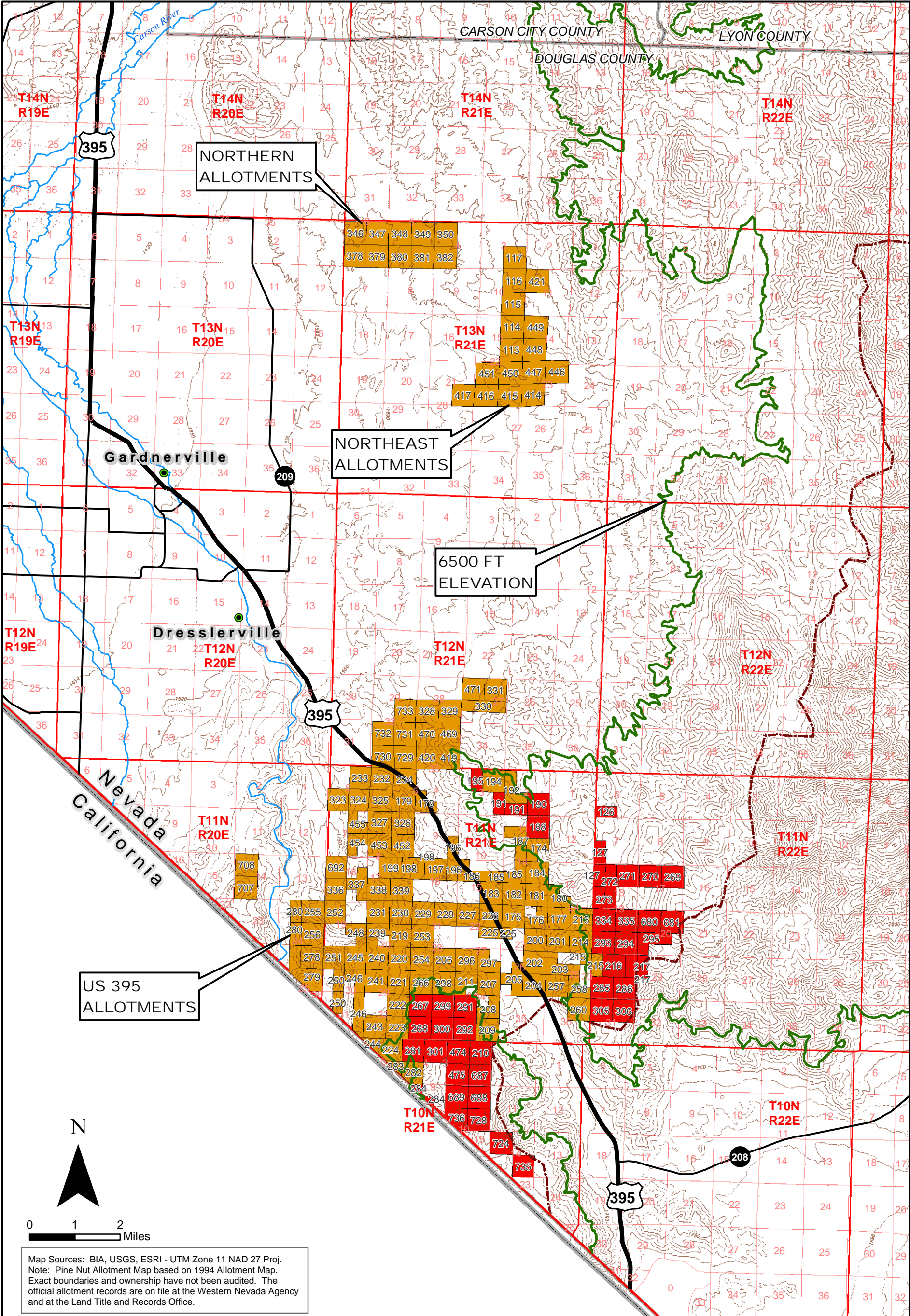
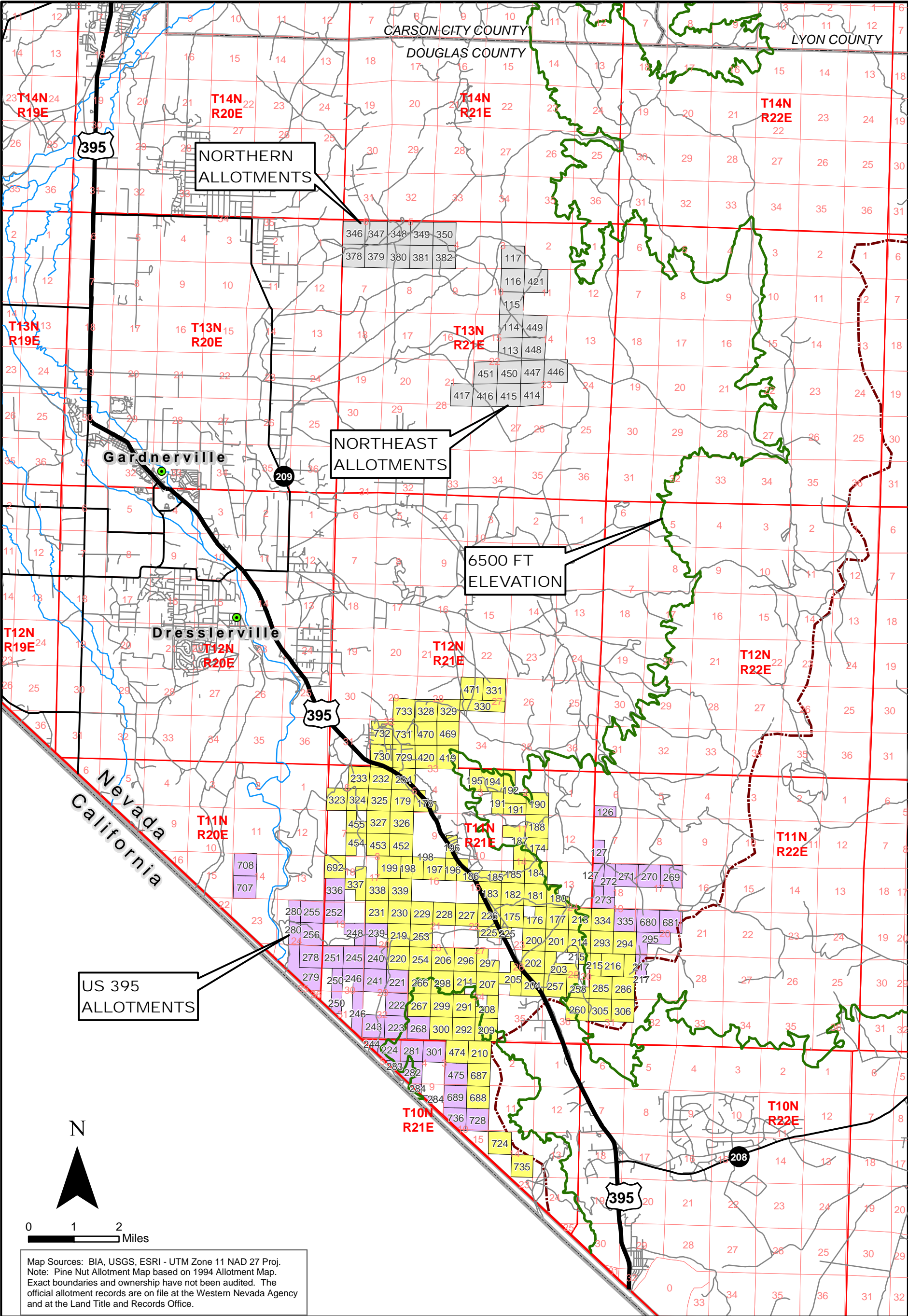


Figure 3
**Allotments Below
6500 Ft. Elevation**
Pine Nut Allotments, Douglas County, Nevada

Map Prepared by Cascade Design Professionals, Inc., Jan. 2009

Legend

- Carson River Watershed Boundary
- 6500 Ft. El.
- Allotments Below 6500 Ft.
- Allotments Above 6500 Ft. (Not Developable)
- 50 Meter Contours



- Legend**
- Carson River Watershed Boundary
 - 6500 Ft. El.
 - Allotments Within 2 miles of US 395
 - Allotments Over 2 miles From US 395
 - Northern Allotments
 - Local Road
 - 50 Meter Contours

Figure 4

Allotments Within Approximately 2 Miles of US 395

Pine Nut Allotments, Douglas County, Nevada

Map Prepared by Cascade Design Professionals, Inc., Jan. 2009

In the overall suitability analysis (see Figure 5), any allotment that did not have any type of road access, or did not have proximity to a road, was also considered non-developable for the foreseeable future.

In the North and Northeast Allotments, access is a different situation. Some allotments are very close to existing public roads or public roads already access them. In addition, rural residential development on fee lands is approaching the allotments or will be there in the near future. As a result, access will be less of an issue over time in these areas, and therefore, most of these allotments are considered ultimately developable even though they are currently not within two miles of an improved public road.

Public Services

Proximity to Power and Communications

As with roads, the proximity of power and communication systems, as well as the ability to extend these systems, is a development concern, particularly if easements need to be secured across other allotments.

In the US 395 area, power and communications are in place along US 395. Any allotment over two miles distance from service was considered undesirable for development within the near future. In the North and Northeast allotment areas, the situation is similar to road access in that utilities are already close to some allotments and as development proceeds to the east, these utilities will eventually be in proximity to the various allotments.

Water Supply and Quality

Based on discussions with local officials and BIA personnel, the extension of water service from existing public systems is not a viable option in serving the allotments. As a result, the assumption is that each development will need to rely on groundwater for domestic use, whether in a community system, depending on development densities, or individual wells for each property.

As part of this project, a Groundwater Supply and Feasibility Study was conducted. Water resources investigations show that aquifers exist at various elevations in the northern area that includes the North Allotments and Northeast Allotments. The shallow aquifers supply most of the development in that area. It is important to note that these aquifers appear not to be fully recharging. As a result, long-term supply will probably need to come from deeper aquifers. As deeper aquifers are accessed, water quality becomes a greater issue as the water is generally “older” and has had more time to absorb contaminants. Well yields also vary in the area.

Groundwater is also available in the southern area (US 395 Allotments), but primarily along the US 395 corridor and to the west of the Highway in Basalt deposits. Aquifers occur at various elevations, some of which are as deep as 1600 feet. A little distance east of Highway 395 the geology is composed of sedimentary rocks that have very poor potential for groundwater. Below the 5200 foot elevation, potential for groundwater is fair. This includes all the northern allotments and those along the US 395 corridor. Between 5200 feet and 6500 feet, the potential is marginal, particularly east of the highway. Also, wells at these elevations are likely to be deeper and, therefore, more costly to develop. The potential for groundwater above 6500 feet is very poor.

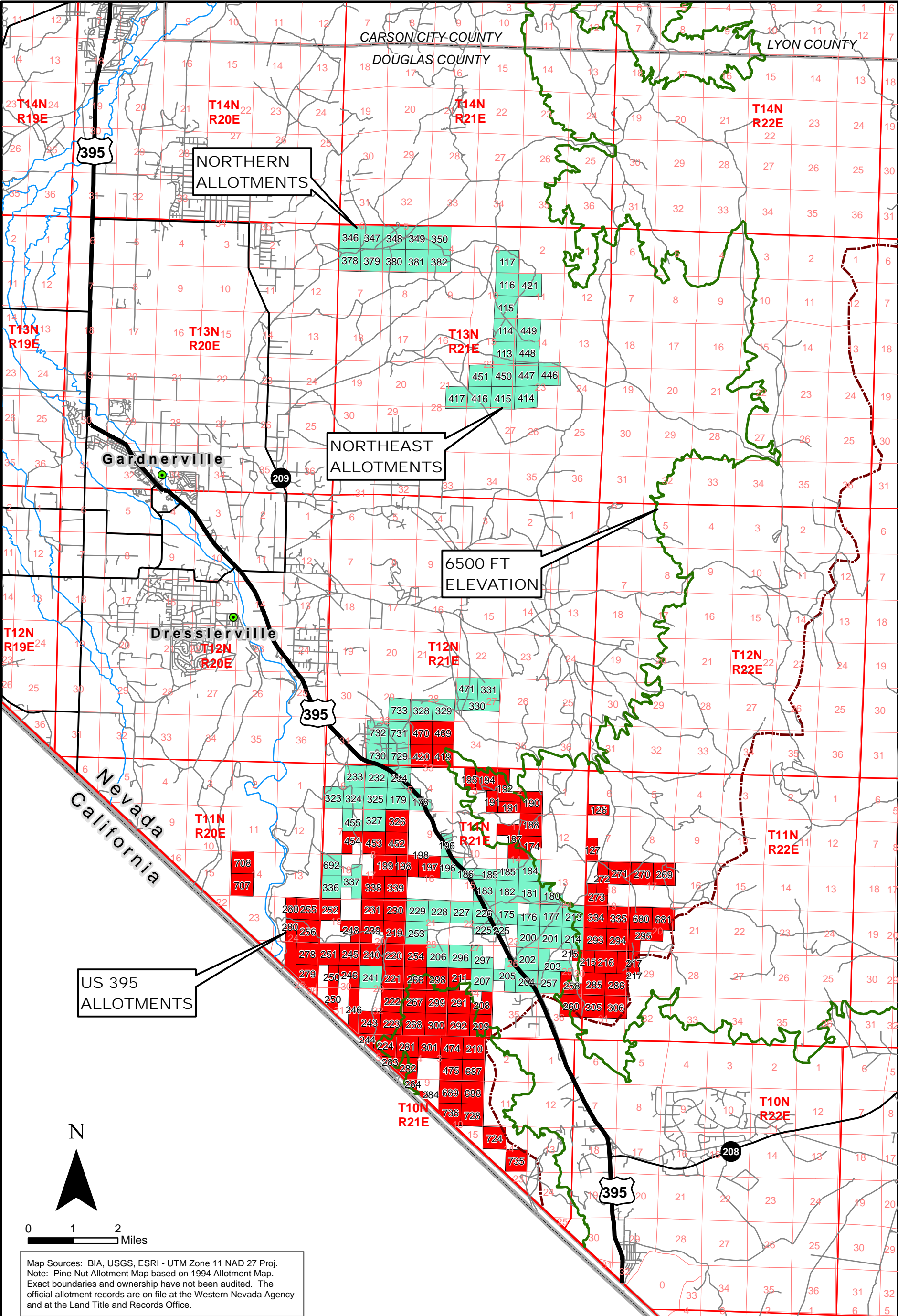


Figure 5
Overall Suitability
Pine Nut Allotments, Douglas County, Nevada

Map Prepared by Cascade Design Professionals, Inc., Jan. 2009

Groundwater quality is also of concern, but information is not definitive to use as a criterion. Nitrates may be a problem in the US 395 area, and in the Carson Valley arsenic has been detected. Also, sulfate, dissolved iron, and manganese exceeded EPA standards for safe drinking water at several sample locations. As a result, testing for water quality will be essential and potential developers need to be prepared to treat groundwater for domestic uses.

Sewerage Facilities

As with water supply and distribution, the extension of sewer service from existing public systems is not a viable option in serving the allotments. As a result, the assumption is that each development will need to provide for sewage collection and treatment whether in a community system or individual systems. Density of development and terrain impact the viability and cost of sewage collection and treatment. Community collection systems can be viable up to approximately one acre parcels. Lower densities will require individual systems for each house.

Terrain is a factor for both community systems and individual systems as the steeper the terrain the more problems in finding appropriate sites and the more cost in constructing these systems. Slopes from 0-9% are considered viable. Minimal earthwork is required and the types and depths of soils are generally more conducive to process treatment systems as well as drain field disposal. Slopes from 9-20% are considered marginal as more excavation is required to construct systems, and soil depth tends to be more shallow. Costs increase considerably in these situations. Slopes of over 20% are considered non-viable. Usually soils are very shallow at these slopes, sometimes soils have to be imported for sub-surface systems, and excavation costs can become prohibitive.

Soils Suitability for Development

After the initial suitability analysis was conducted, the BIA and the USDA Natural Resources Conservation Service (NRCS) recently completed a Rangeland Resource Inventory for the Pine Nut Allotments that included a detailed soils study. This study (*Pine Nut Allotments Rangeland Resource Inventory, Final Report*, December 2007) rated the suitability of the various soil types to support differing uses. Based on the NRCS report, the development suitability of those allotments that were identified as having development potential was analyzed (See Appendix A for the detailed analysis.) Since the soils analysis was an extensive exercise, the analysis was limited to those allotments that were identified as potentially developable in this Land Use Suitability Analysis.

For residential, commercial, and light industrial development, six critical suitability factors were evaluated. These included: local roads and streets, shallow excavations, dwellings and small commercial buildings, source of roadfill, septic tank absorption fields, and sewage lagoons. These factors are very critical as they have a direct correlation to the cost of development. As the soil suitability decreases, costs for development increase. For example, shallow soil depth requires rock excavation for building foundations and for construction roads, and poor soils for sewage absorption fields means some type of community system, and if soils are not suitable for lagoons, some type of treatment process would be required, all of which add considerable cost to development projects, which in turn directly affect a developer's ability to compete in the market place.

Even though soils may not be the best for development, poor soil conditions can be mitigated to some extent, such as through excavation and importing appropriate soil types, lower density development, or use of community wastewater treatment facilities. Even though the soils in the area are not the best for development, it should be noted that development has occurred in some marginally suitable areas, such as the allotment where the Pine View Estates are located. Soil problems can be overcome, but it adds to the

cost of development and impacts the overall feasibility of a proposed development. Ultimately, local market conditions determine whether the costs of development are warranted to maintain competitiveness in the marketplace.

Ownership

Although ownership is not a physical characteristic, the number of owners for each allotment is a factor that will play a role in the desirability of an allotment to a developer. The fewer owners, the more chance that consensus can be reached and in a shorter time frame. The more owners, the less chance that even a majority can be reached, and if one can be reached it may take considerable effort and time, all of which increases the cost to a developer. This problem was pointed out during the first set of public meetings where a number of allotment owners remarked that with multiple ownerships, reaching agreement on anything was very difficult and impossible in many cases. It should be noted that the only existing development (Pine View Estates) occurred on an allotment with only one owner. The detailed ownership analysis is included in Appendix B.

Ownership numbers range from one to well over 100 in a number of cases. The following criteria were established to evaluate the attractiveness to a developer:

- 0-5 owners—good
- 6-15 owners—fair
- 16-30 owners—marginal
- 31-50 owners—poor
- Greater than 50 owners—very poor

Realistically, a developer is not going to be attracted to allotments with more than 15 owners. However, like poor soil suitability, the multiple ownership issue can be mitigated to a great degree if the allotment owners were to agree to establish a legal entity, such as a development corporation, with a small board of directors that are empowered to make binding decisions. Setting up such an entity, however, also requires agreement by a majority of owners.

Findings

Based on the physical characteristics discussed above, the overall findings are summarized for each allotment area in the following. Table 2 shows the suitability rankings for the various criteria used in the evaluation, and Figures 6 illustrate development suitability rankings for each allotment by location.

North Allotments

All of the 10 allotments in this area are totally, or in part, developable. Only one allotment has potential slope problems in some areas, but development can be designed to avoid that portion of the allotment. Rural residential development is extending from the west and is almost at the western allotments in the group. Public roads and power and communication systems are also in proximity and will likely be extended to the east as urbanization occurs.

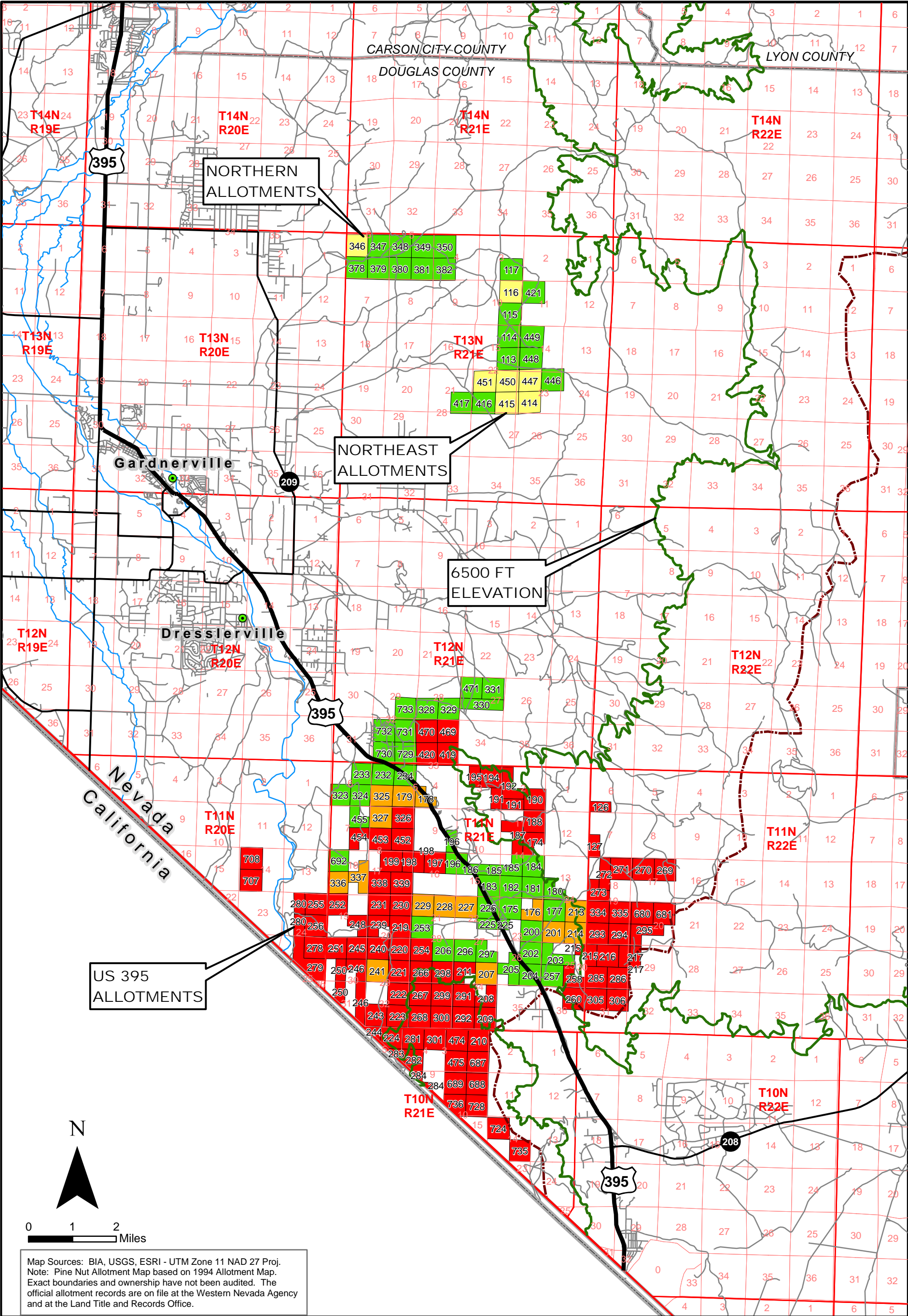


Figure 6

Development Suitability

Pine Nut Allotments, Douglas County, Nevada

Map Prepared by Cascade Design Professionals, Inc., Jan. 2009

Legend

- 6500 Ft. El.

Local Road

Carson River Watershed Boundary

50 Meter Contours

Development Suitability

Good

Fair

Marginal

Not Developable

In general, soils suitability for shallow excavations and for construction of dwellings or commercial structures is not particularly good. Also, ratings for community sewage lagoons are very poor in this area. However, a number of soils have fair suitability ratings for septic tank drainfields. As a result, large lot development, similar to that which has occurred to the west of these allotments, with individual septic tanks with drainfields may be possible in some areas. Otherwise, community wastewater treatment facilities probably will be necessary and will increase the cost of development.

The number of allotment owners in this area is fairly attractive as well, since over half have 15 or less owners, although none has five or less owners.

Northeast Allotments

All of the 16 allotments in this area are totally developable. Although further to the east than the North Allotments, rural residential development from the southwest will eventually extend over the mid- and long-term to this block of allotments. Public roads and power and communication systems also will be extended with this development eventually making these allotments very attractive for development.

Soil problems in this area are similar to the North Allotments—not particularly good for shallow excavations and for dwellings and small commercial structures. Likewise, there are some soil types where septic tank drainfields will probably be possible, and could support low density development.

The number of allotment owners is also workable for many of these allotments as half have 15 or less owners and five allotments have 5 or less owners.

US 395 Allotments

The US 395 corridor has a variety of terrain and elevation issues as well as access problems. The analysis shows that 39 allotments are suitable for development, 15 have marginal suitability, and 96 are not suitable. (See Figure 5 for the locations of developable allotments.) The most attractive allotments for development lie adjacent to US 395 where access is direct and there is fairly level terrain. A few other allotments are also attractive on the north and northwest boundary of the allotments, due to favorable slopes and existing access.

It should be noted that several allotments were included even though they did not strictly meet development criteria, because they were either adjacent to US 395, had other access, or had fairly level terrain.

The biggest problems for development along this corridor are excessive slopes, high elevations, and lack of access and/or excessive distance from US 395. Also, groundwater availability diminishes east of US 395.

Because of the steeper terrain and shallow soils, soil conditions in this area are less desirable for development than the northern allotments. One of the biggest development cost factors in this area will be the need for community sewage treatment systems as almost uniformly the soils are not suitable for either septic tank drainfields or for community lagoon systems. As was the case with the Pine View development, wastewater treatment plants most likely will be required. Also, soil suitability for shallow excavation and for dwellings and small scale commercial developments is not very good and will be a problem in areas where slopes increase.

Ownership is a much bigger issue in this area. Overall, only 32% of the allotments have 15 or less owners and 13% have five or less owners. However, 31% of the allotments have 50 or more owners, including a number with over 100 owners.

Data Sources

USGS Topographic Data
USDA Natural Resources Conservation Service
BIA unpublished data

Prepared by

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Table 2
LAND USE ASSESSMENT MATRIX

ALLOTMENT DATA						PHYSICAL CHARACTERISTICS											HIGHEST & BEST USE								
						Topography		Accessibility			Public Services & Health & Safety			Cultural Res.	Natural Resources			Commercial Residential			Commercial Investment			Comm. Rec.	Other
Allotment No.	Allotment Name	Size (acres)	Location	No. of Owners	Current Land Use	Slope (%)	Altitude	Existing Road	Miles from paved road	Developable (yes/no)	Sewage Treatment	Proximity to Power (miles)	Proximity to Communications (mi.)	Pinon Forest (quality pin nut resource)	Groundwater Potential	Soils Suitability for development*	Identified Mineral Resources	High Density (subdivision)	Medium Density	Low Density (rural)	Highway Retail	Neighborhood Services	Light Industrial	Destination	Natural Resource Management Area (timber, pine nuts, grazing, etc.)
346	Deve Mo St	148.80	North	10	Undev.	12-20	<5800	Yes	1.0	Yes	Marginal	1.0	1.0	No	Fair	Poor	No	No	No	M	No	No	No	M	
347	Mary Dick	161.30	North	10	Undev.	6-9	<5800	Yes	1.5	Yes	Yes	1.5	1.5	No	Fair	Fair	No	M	Yes	Yes	No	M	No	Yes	
348	Wallace Dic	161.45	North	10	Undev.	0-6	<5800	Yes	2.0	Yes	Yes	2.0	2.0	No	Fair	V. Poor	No	Yes	Yes	Yes	No	M	No	Yes	
349	Walking Dic	160.93	North	10	Undev.	0-6	<5800	Yes	2.5	Yes	Yes	2.5	2.5	No	Fair	V. Poor	No	Yes	Yes	Yes	No	M	No	Yes	
350	Joe Dick	160.72	North	10	Undev.	6-9	<5800	Yes	3.0	Yes	Yes	3.0	3.0	No	Fair	V. Poor	No	M	Yes	Yes	No	M	No	Yes	
378	LittleCharley	148.80	North	24	Undev.	0-6	<5800	Yes	1.0	Yes	Yes	1.0	1.0	No	Fair	Fair	No	Yes	Yes	Yes	No	M	No	Yes	
379	Susie Charl	160.00	North	24	Undev.	0-6	<5800	Yes	1.5	Yes	Yes	1.5	1.5	No	Fair	V. Poor	No	Yes	Yes	Yes	No	M	No	Yes	
380	Wm Dave T	160.00	North	24	Undev.	0-6	<5800	Yes	2.0	Yes	Yes	2.0	2.0	No	Fair	V. Poor	No	Yes	Yes	Yes	No	M	No	Yes	
381	Saddie Tony	160.00	North	24	Undev.	0-6	<5800	No	2.5	Yes	Yes	2.5	2.5	No	Fair	Poor	No	Yes	Yes	Yes	No	M	No	Yes	
382	Willie Tondy	160.00	North	15	Undev.	6-9	<5800	Yes	3.0	Yes	Yes	3.0	3.0	No	Fair	V. Poor	No	M	Yes	Yes	No	M	No	Yes	
	Total Ac.	1582.00	North Allotments																						
117	Sussie Jim	160.00	NE	13	Undev.	0-6	<5800	Yes	5.0	Yes	Yes	5.0	5.0	No	Fair	Poor	No	Yes	Yes	Yes	No	M	No	Yes	
116	Louis Jim or	160.00	NE	27	Undev.	6-9	<5800	No	5.0	Yes	Yes	5.0	5.0	No	Fair	Poor	No	M	Yes	Yes	No	M	No	Yes	
421	Daw-Lah-Lu	160.00	NE	15	Undev.	6-9	<5800	Yes	6.0	Yes	Yes	5.5	5.5	No	Fair	V. Poor	No	M	Yes	Yes	No	M	No	Yes	
115	John Charle	160.00	NE	27	Undev.	0-6	<5800	Yes	5.5	Yes	Yes	4.5	5.5	No	Fair	Poor	No	Yes	Yes	Yes	No	M	No	Yes	
114	Maggie Jim	160.00	NE	27	Undev.	0-6	<5800	Yes	6.0	Yes	Yes	3.5	3.5	No	Fair	V. Poor	No	Yes	Yes	Yes	No	M	No	Yes	
449	Sussie Jim(I	160.00	NE	38	Undev.	0-6	<5800	Yes	6.5	Yes	Yes	4.0	4.0	No	Fair	Poor	No	Yes	Yes	Yes	No	M	No	Yes	
113	Jim Iaciah	160.00	NE	27	Undev.	6-9	<5800	Yes	7.5	Yes	Yes	3.5	3.5	No	Fair	V. Poor	No	M	Yes	Yes	No	M	No	Yes	
448	Old Jim or A	160.00	NE	38	Undev.	0-6	<5800	Yes	7.0	Yes	Yes	4.0	4.0	No	Fair	V. Poor	No	Yes	Yes	Yes	No	M	No	Yes	
451	Mogan Dav	160.00	NE	14	Undev.	6-9	<5800	No	8.0	Yes	Yes	3.0	3.0	No	Fair	V. Poor	No	M	Yes	Yes	No	M	No	Yes	
450	Dave or Sos	160.00	NE	24	Undev.	9-12	<5800	No	8.5	Yes	Marginal	3.5	3.5	No	Fair	No	No	No	M	Yes	No	No	No	M	
447	Wm Fender	160.00	NE	2	Undev.	6-9	<5800	No	9.0	Yes	Yes	4.0	4.0	No	Fair	V. Poor	No	M	Yes	Yes	No	M	No	Yes	
446	Mary Fende	160.00	NE	2	Undev.	0-6	<5800	Yes	9.5	Yes	Yes	4.5	4.5	No	Fair	V. Poor	No	Yes	Yes	Yes	No	M	No	Yes	
417	Mary Jacks	160.00	NE	26	Undev.	0-6	<5800	Yes	7.0	Yes	Yes	2.5	2.5	No	Fair	V. Poor	No	Yes	Yes	Yes	No	M	No	Yes	
416	Silas Jacks	160.00	NE	2	Undev.	6-9	<5800	Yes	7.5	Yes	Yes	3.0	3.0	No	Fair	V. Poor	No	M	Yes	Yes	No	M	No	Yes	
415	Cajbert Jack	160.00	NE	1	Undev.	6-9	<5800	No	8.0	Yes	Yes	3.5	3.5	No	Fair	V. Poor	No	M	Yes	Yes	No	M	No	Yes	
414	Jack Jackso	160.00	NE	1	Undev.	6-9	<5800	No	8.5	Yes	Yes	4.0	4.0	No	Fair	V. Poor	No	M	Yes	Yes	No	M	No	Yes	
	Total Ac.	2560.00	Northeast Allotments																						
471	Maggie Arth	160.00	US 395	145	Undev.	0-6	<5800	Yes	>2.0	Yes	Yes	>2.0	>2.0	No	Fair	V. Poor	No	Yes	Yes	Yes	No	No	No	No	
331	Delie Aleck	160.00	US 395	48	Undev.	6-9	<6500	Yes	>2.0	Yes	Yes	>2.0	>2.0	No	M	V. Poor	No	M	M	Yes	No	No	No	No	
733	Saverse Sny	160.00	US 395	35	Undev.	6-9	<5800	Yes	1.1	Yes	Yes	1.1	1.1	No	Fair	V. Poor	No	M	Yes	Yes	No	No	No	No	
328	Aleck or Co	160.00	US 395	5	Undev.	12-20	5800	Yes	1.3	Yes	Marginal	1.3	1.3	No	M	V. Poor	No	No	No	M	No	No	No	No	
329	Lucy Aleck	160.00	US 395	41	Undev.	6-9	5800	Yes	1.5	Yes	Yes	1.5	1.5	No	M	V. Poor	No	No	M	Yes	No	No	No	No	
330	Minnie Alec	160.00	US 395	46	Undev.	9-12	5800	Yes	2.0	Yes	Marginal	2.0	2.0	No	M	V. Poor	No	No	M	M	No	No	No	No	

Table 2
LAND USE ASSESSMENT MATRIX

ALLOTMENT DATA						PHYSICAL CHARACTERISTICS												HIGHEST & BEST USE							
						Topography		Accessibility			Public Services & Health & Safety			Cultural Res.	Natural Resources			Commercial Residential			Commercial Investment			Comm. Rec.	Other
Allotment No.	Allotment Name	Size (acres)	Location	No. of Owners	Current Land Use	Slope (%)	Altitude	Existing Road	Miles from paved road	Developable (yes/no)	Sewage Treatment	Proximity to Power (miles)	Proximity to Communications (mi.)	Pinon Forest (quality pin nut resource)	Groundwater Potential	Soils Suitability for development*	Identified Mineral Resources	High Density (subdivision)	Medium Density	Low Density (rural)	Highway Retail	Neighborhood Services	Light Industrial	Destination	Natural Resource Management Area (timber, pine nuts, grazing, etc.)
732	Josie Snook	160.00	US 395	4	Subdiv.	6-9	<5800	Yes	0.4	Yes	Yes	0.4	0.4	No	Fair	V. Poor	No	M	Yes	Yes	No	No	No	No	
731	Geo Snooks	160.00	US 395	24	Homes	6-9	<5800	Yes	0.6	Yes	Yes	0.6	0.6	No	Fair	V. Poor	No	M	Yes	Yes	No	No	No	No	
470	Annie Tom	160.00	US 395	46	Undev.	>20	5800	Yes	1.8	No	No	0.8	0.8	No	V. P.		No	No	No	No	No	No	No	No	Yes
469	Joe (Bart) T	160.00	US 395	11	Undev.	>20	<6500	No	2.5	No	No	1.1	1.1	No	M		No	No	No	No	No	No	No	No	Yes
730	Tillie Snook	160.00	US 395	14	Homes	0-6	<5800	Yes	0.05	Yes	Yes	0.1	0.1	No	Fair	V. Poor	No	M	Yes	Yes	Yes	Yes	M	M	
729	Indian Snook	162.50	US 395	26	Homes	0-6	<5800	Yes	0.3	Yes	Yes	0.1	0.1	No	Fair	V. Poor	No	M	Yes	Yes	Yes	Yes	M	M	
420	Sussie (No3	160.00	US 395	150	Undev.	>20	5800	Yes	0.8	No	No	0.4	0.4	No	V. P.		No	No	No	No	No	No	No	No	Yes
419	(Williamholot	160.00	US 395	84	Undev.	>20	6500	No	1.3	No	No	0.7	0.7	Marginal	V. P.		No	No	No	No	No	No	No	No	Yes
233	Annie Joe	161.08	US 395	7	Undev.	6-9	<5800	Yes	0.3	Yes	Yes	0.2	0.2	No	Fair	V. Poor	No	M	Yes	Yes	No	M	No	M	
232	Little Joe or	161.43	US 395	1	Undev.	9-12	<5800	Yes	0.05	Yes	Marginal	0.1	0.1	No	Fair	V. Poor	No	M	M	Yes	M	M	No	No	
234	Maggie Joe	98.10	US 395	2	Subdiv.	6-9	<5800	Yes	0.05	Yes	Yes	0.1	0.1	No	Fair	V. Poor	No	Yes	Yes	Yes	M	M	No	No	
195	Ogie Smoky	119.39	US 395	61	Undev.	12-20	>6500	Yes	2.7	No	Marginal	1.1	1.1	Yes	V. P.		No	No	No	No	No	No	No	No	Yes
194	Johnny Smd	158.07	US 395	61	Undev.	9-12	>6500	Yes	2.3	No	Marginal	1.3	1.3	Yes	V. P.		No	No	No	No	No	No	No	No	Yes
192	Sally Pede	158.82	US 395	83	Undev.	12-20	>6500	No	2.8	No	Marginal	1.7	1.7	Yes	V. P.		No	No	No	No	No	No	No	No	Yes
323	Eliza Washi	154.25	US 395	11	Undev.	9-12	<5800	Yes	1.0	Yes	Marginal	0.8	0.8	No	Fair	V. Poor	No	No	M	Yes	No	No	No	No	
324	Geo Washir	160.00	US 395	8	homes	9-12	<5800	Yes	0.8	Yes	Marginal	0.7	0.7	No	Fair	V. Poor	No	No	M	Yes	No	No	No	No	
325	Daisy Wash	160.00	US 395	6	Undev.	9-12	<5800	No	1.1	Marginal	Marginal	0.4	0.4	No	Fair	V. Poor	No	No	M	Yes	No	No	No	No	
179	Sally Jim	160.00	US 395	79	Undev.	>20	<6500	Yes	0.1	Marginal	No	0.1	0.1	No	Fair	V. Poor	No	No	No	M	No	No	No	No	
178	Jim Or Col-	120.00	US 395	63	Undev.	>20	<6500	Yes	0.05	Marginal	No	0.1	0.1	No	Fair	V. Poor	No	No	M	Yes	No	No	No	No	
191	Annie Pede	160.00	US 395	57	Undev.	12-20	>6500	Yes	2.0	No	Marginal	1.3	1.3	Yes	V. P.		No	No	No	No	No	No	No	No	Yes
190	Bill El E Lo V	160.00	US 395	114	Undev.	>20	>6500	Yes	>3.0	No	No	1.9	1.9	Yes	V. P.		No	No	No	No	No	No	No	No	Yes
126	Jim Or Top	157.13	US 395	42	Undev.	>20	>6500	Yes	>3.0	No	No	>2.0	>2.0	Yes	V. P.		No	No	No	No	No	No	No	No	Yes
455	Birdy Bath	120.00	US 395	10	Undev.	9-12	<5800	Yes	1.4	Yes	Marginal	1.4	1.4	No	Fair	V. Poor	No	No	No	Yes	No	No	No	No	
327	Nannie Bill	160.00	US 395	7	Undev.	12-20	<6500	No	1.8	Marginal	Marginal	0.8	0.8	No	Fair	V. Poor	No	No	No	M	No	No	No	No	
326	Da-Mah-Sh	160.00	US 395	5	Undev.	>20	<6500	No	1.1	No	No	0.4	0.4	No	Fair		No	No	No	No	No	No	No	No	Yes
187	Dave Cheer	160.00	US 395	49	Undev.	12-20	6500	Yes	2.4	No	Marginal	1.0	1.0	Marginal	V. P.		No	No	No	No	No	No	No	No	
188	Cora Cheer	160.00	US 395	31	Undev.	>20	>6500	Yes	2.6	No	No	1.5	1.5	Yes	V. P.		No	No	No	No	No	No	No	No	Yes
454	Dandy Bath	120.00	US 395	3	Undev.	12-20	5800	Yes	2.1	No	Marginal	1.5	1.5	No	Fair		No	No	No	No	No	No	No	No	
453	Polly Bath	160.00	US 395	3	Undev.	>20	<6500	No	2.6	No	No	1.1	1.1	No	Fair		No	No	No	No	No	No	No	No	
452	Sam Bath o	160.00	US 395	10	Undev.	12-20	<6500	No	1.0	No	Marginal	0.6	0.6	No	Fair		No	No	No	No	No	No	No	No	
196	Willie Smok	160.00	US 395	61	House	6-9	<6500	Yes	0.05	Yes	Yes	0.1	0.1	No	M	No	No	No	M	Yes	Yes	M	No	No	
174	Manny Bend	160.00	US 395	9	Undev.	>20	6500	Yes	1.8	No	No	1.3	1.3	Marginal	V. P.		No	No	No	No	No	No	No	No	
127	Sussie Jim	157.32	US 395	24	Undev.	12-20	>6500	Yes	2.8	No	Marginal	>2.0	>2.0	Yes	V. P.		No	No	No	No	No	No	No	No	
692	Candu Tom	152.25	US 395	9	Undev.	6-9	<6500	Yes	3.3	Yes	Yes	>2.0	>2.0	No	Fair	V. Poor	No	No	No	Yes	No	No	No	M	
337	Jenny Moor	160.00	US 395	22	Undev.	12-20	<6500	Yes	2.8	Marginal	Marginal	2.0	2.0	No	Fair	V. Poor	No	No	No	M	No	No	No	No	
199	Molly Tom	160.00	US 395	59	Undev.	12-20	<6500	No	3.0	No	Marginal	1.1	1.1	No	Fair		No	No	No	No	No	No	No	No	
198	Tom Or Det	160.00	US 395	100	Undev.	12-20	<6500	No	0.9	No	Marginal	1.9	1.9	No	Fair		No	No	No	No	No	No	No	No	
197	Lillie Smoky	160.00	US 395	61	Undev.	9-12	<6500	No	0.3	No	Marginal	0.3	0.3	No	Fair		No	No	No	No	No	No	No	No	
186	Senah Pitch	145.47	US 395	7	House	6-9	<6500	Yes	0.05	Yes	Yes	0.1	0.1	No	Fair	V. Poor	No	No	M	Yes	Yes	M	No	No	
185	Lucy Pitchw	160.00	US 395	18	Undev.	9-12	<6500	Yes	0.4	Yes	Marginal	0.4	0.4	No	M	No	No	M	Yes	Yes	M	M	No	No	
184	Jim Pitchwo	160.00	US 395	15	Undev.	9-12	6500	Yes	1.3	Yes	Marginal	1.0	1.0	Marginal	V. P.	V. Poor	No	No	M	Yes	No	No	No	No	

Table 2
LAND USE ASSESSMENT MATRIX

ALLOTMENT DATA						PHYSICAL CHARACTERISTICS										HIGHEST & BEST USE									
Allotment No.	Allotment Name	Size (acres)	Location	No. of Owners	Current Land Use	Topography		Accessibility		Developable (yes/no)	Public Services & Health & Safety			Cultural Res.	Natural Resources			Commercial Residential			Commercial Investment			Comm. Rec.	Other
						Slope (%)	Altitude	Existing Road	Miles from paved road		Sewage Treatment	Proximity to Power (miles)	Proximity to Communications (mi.)		Groundwater Potential	Soils Suitability for development*	Identified Mineral Resources	High Density (subdivision)	Medium Density	Low Density (rural)	Highway Retail	Neighborhood Services	Light Industrial	Destination	Natural Resource Management Area (timber, pine nuts, grazing, etc.)
272	Harriette Ch	120.00	US 395	134	Undev.	12-20	>6500	Yes	>3.0	No	Marginal	>2.0	>2.0	Yes	V. P.		No	No	No	No	No	No	No	No	
271	Gilla Charle	160.00	US 395	1	Undev.	>20	>6500	Yes	>3.0	No	No	>2.0	>2.0	Yes	V. P.		No	No	No	No	No	No	No	No	Yes
270	Sissie Char	160.00	US 395	77	Undev.	>20	>6500	Yes	>3.0	No	No	>2.0	>2.0	Yes	V. P.		No	No	No	No	No	No	No	No	Yes
269	Washoe Ch	160.00	US 395	77	Undev.	>20	>6500	Yes	>4.0	No	No	>2.0	>2.0	Yes	V. P.		No	No	No	No	No	No	No	No	Yes
336	Dah Hom D	153.55	US 395	26	Undev.	0-6	<6500	No	3.6	Marginal	Yes	>2.0	>2.0	No	Fair	No	No	No	Yes	No	No	No	No	M	
338	John Moore	160.00	US 395	1	Undev.	12-20	<6500	No	1.8	No	Marginal	1.6	1.6	No	Fair		No	No	No	No	No	No	No	No	Yes
339	Sanky Heirs	160.00	US 395	21	Undev.	12-20	<6500	No	1.3	No	Marginal	1.6	1.6	No	Fair		No	No	No	No	No	No	No	No	Yes
183	Ozen Hack	160.00	US 395	16	Undev.	0-6	<6500	Yes	0.05	Yes	Yes	0.1	0.1	No	Fair	V. Poor	No	M	Yes	Yes	Yes	Yes	No	No	
182	Ida Hack	160.00	US 395	1	Undev.	9-12	<6500	Yes	0.3	Yes	Marginal	0.3	0.3	No	Fair	V. Poor	No	No	M	Yes	No	M	No	No	
181	McCue Har	160.00	US 395	7	Undev.	9-12	<6500	Yes	1.1	Yes	Marginal	0.8	0.8	No	V. P.	No	No	M	Yes	No	No	No	No	No	
180	Mammie Ha	120.00	US 395	36	Undev.	12-20	6500	Yes	1.7	Yes	Marginal	1.2	1.2	Marginal	V. P.	No	No	M	Yes	No	No	No	No	No	
273	Washoe (Da	119.2119.2	US 395	129	Undev.	>20	>6500	Yes	2.9	No	No	>2.0	>2.0	Yes	V. P.		No	No	No	No	No	No	No	No	Yes
280	Little Sam o	160.00	US 395	2	Undev.	>20	<5800	Yes	>4.0	No	No	>2.0	>2.0	No	Fair		No	No	No	No	No	No	No	No	Yes
255	Jack West	160.00	US 395	42	Undev.	>20	5800	No	>4.0	No	No	>2.0	>2.0	No	Fair		No	No	No	No	No	No	No	No	Yes
252	Pat Jonah	154.95	US 395	3	Undev.	>20	<6500	No	>3.5	No	No	>2.0	>2.0	No	Fair		No	No	No	No	No	No	No	No	Yes
231	Anson Dick	160.00	US 395	1	Undev.	9-12	<6500	No	2.6	No	Marginal	0.8	0.8	No	Fair		No	No	No	No	No	No	No	No	Yes
230	John Dick	160.00	US 395	134	Undev.	>20	<6500	No	2.2	No	No	1.5	1.5	No	Fair		No	No	No	No	No	No	No	No	Yes
229	Willie Dick	160.00	US 395	30	Undev.	12-20	<6500	No	1.7	Marginal	Marginal	0.2	0.2	No	Fair	No	No	No	M	No	No	No	No	No	
228	Lizzie Dick	160.00	US 395	30	Undev.	12-20	<6500	No	1.2	Marginal	Marginal	0.2	0.2	No	Fair	V. Poor	No	No	No	M	No	No	No	No	
227	Washoe (Ur	160.00	US 395	134	Undev.	12-20	<6500	No	0.7	Marginal	Marginal	0.2	0.2	No	Fair	V. Poor	No	No	No	M	No	No	No	No	
226	Sally John	160.00	US 395	80	Undev.	6-9	<6500	Yes	0.05	Yes	Yes	0.1	0.1	No	Fair	V. Poor	No	M	Yes	Yes	Yes	Yes	No	No	
175	Wa-Pe-Cu-E	160.00	US 395	31	Undev.	6-9	<6500	Yes	0.4	Yes	Yes	0.1	0.1	No	Fair	V. Poor	No	M	Yes	Yes	Yes	Yes	M	No	
176	Louisa Fillm	120.00	US 395	29	Undev.	12-20	<6500	No	1.3	Marginal	Marginal	0.6	0.6	No	Fair	No	No	No	M	No	No	No	No	No	
177	Totsie Fillm	160.00	US 395	31	Undev.	12-20	<6500	Yes	1.1	Yes	Marginal	1.0	1.0	No	M	No	No	No	M	No	No	No	No	No	
213	Henry Or Sc	160.00	US 395	18	Undev.	>20	6500	Yes	1.7	Marginal	No	1.4	1.4	Marginal	V. P.	No	No	No	M	No	No	No	No	No	
334	Dah-Bah-M	159.25	US 395	1	Undev.	>20	>6500	No	2.2	No	No	1.8	1.8	Yes	V. P.		No	No	No	No	No	No	No	No	Yes
335	Nancy Doct	160.00	US 395	1	Undev.	>20	>6500	No	>2.5	No	No	>2.0	>2.0	Yes	V. P.		No	No	No	No	No	No	No	No	Yes
680	Lillie Washo	160.00	US 395	15	Undev.	>20	>6500	Yes	>4.0	No	No	>2.0	>2.0	Yes	V. P.		No	No	No	No	No	No	No	No	Yes
681	Nettie Wash	160.00	US 395	8	Undev.	>20	>6500	Yes	>6.0	No	No	>2.0	>2.0	Yes	V. P.		No	No	No	No	No	No	No	No	Yes
256	Sarah West	160.00	US 395	45	Undev.	>20	<5800	Yes	>3.5	No	No	>2.0	>2.0	No	Fair		No	No	No	No	No	No	No	No	Yes
248	Jack Nye	120.00	US 395	8	Undev.	>20	<6500	Yes	3.0	No	No	>2.0	>2.0	No	Fair		No	No	No	No	No	No	No	No	Yes
239	Long Dick o	120.00	US 395	60	Undev.	>20	<6500	Yes	2.5	No	No	>2.0	>2.0	No	Fair		No	No	No	No	No	No	No	No	Yes
219	Jake Or Tuk	160.00	US 395	92	Undev.	>20	<6500	Yes	2.1	No	No	1.8	1.8	No	Fair		No	No	No	No	No	No	No	No	Yes
253	(LasSee) W	160.00	US 395	91	Undev.	6-9	<6500	Yes	1.6	Yes	Yes	1.3	1.3	No	Fair	No	No	M	M	Yes	No	M	No	No	
225	Jim John	120.00	US 395	126	House	0-6	<6500	Yes	0.05	Yes	Yes	0.1	0.1	No	Fair	Poor	No	Yes	Yes	Yes	Yes	Yes	M	M	
200	Charley (or	160.00	US 395	28	Undev.	6-9	<6500	Yes	0.4	Yes	Yes	0.3	0.3	No	Fair	No	No	M	Yes	No	No	No	No	M	
201	Bess Buel	160.00	US 395	5	Undev.	12-20	<6500	Yes	0.9	Marginal	Marginal	0.7	0.7	No	M	No	No	No	M	No	No	No	No	No	
214	Annie Henry	160.00	US 395	34	Undev.	12-20	6500	Yes	1.2	Marginal	Marginal	1.1	1.1	Marginal	V. P.	No	No	No	M	No	No	No	No	No	
293	Geo Washo	158.95	US 395	34	Undev.	>20	>6500	No	1.7	No	No	1.6	1.6	Yes	V. P.		No	No	No	No	No	No	No	No	Yes
294	Minnie Was	160.00	US 395	34	Undev.	>20	>6500	No	2.2	No	No	1.8	1.8	Yes	V. P.		No	No	No	No	No	No	No	No	Yes
295	Fred Washo	160.00	US 395	18	Undev.	>20	>6500	Yes	>3.0	No	No	>2.0	>2.0	Yes	V. P.		No	No	No	No	No	No	No	No	Yes

Table 2
LAND USE ASSESSMENT MATRIX

ALLOTMENT DATA						PHYSICAL CHARACTERISTICS												HIGHEST & BEST USE							
						Topography		Accessibility			Public Services & Health & Safety			Cultural Res.	Natural Resources			Commercial Residential			Commercial Investment			Comm. Rec.	Other
Allotment No.	Allotment Name	Size (acres)	Location	No. of Owners	Current Land Use	Slope (%)	Altitude	Existing Road	Miles from paved road	Developable (yes/no)	Sewage Treatment	Proximity to Power (miles)	Proximity to Communications (mi.)	Pinon Forest (quality pin nut resource)	Groundwater Potential	Soils Suitability for development*	Identified Mineral Resources	High Density (subdivision)	Medium Density	Low Density (rural)	Highway Retail	Neighborhood Services	Light Industrial	Destination	Natural Resource Management Area (timber, pine nuts, grazing, etc.)
279	Sis Bly	146.79	US 395	52	Undev.	>20	5800	Yes	>5.0	No	No	>2.0	>2.0	No	Fair		No	No	No	No	No	No	No	No	Yes
278	Jim Bly	160.00	US 395	54	Undev.	>20	5800	No	>5.0	No	No	>2.0	>2.0	No	Fair		No	No	No	No	No	No	No	No	Yes
251	Dick Jonah	155.89	US 395	37	Undev.	>20	5800	Yes	4.1	No	No	>2.0	>2.0	No	Fair		No	No	No	No	No	No	No	No	Yes
245	Bill Nye	160.00	US 395	45	Undev.	>20	<6500	No	>4.0	No	No	>2.0	>2.0	No	Fair		No	No	No	No	No	No	No	No	Yes
240	Sussie Dick	160.00	US 395	80	Undev.	12-20	<6500	Yes	3.1	No	Marginal	>2.0	>2.0	No	Fair		No	No	No	No	No	No	No	No	Yes
220	Lizzie Jake	160.00	US 395	92	Undev.	>20	<6500	Yes	2.7	No	No	0.4	0.4	No	Fair		No	No	No	No	No	No	No	No	Yes
254	Eliza Ben	160.00	US 395	91	Undev.	6-9	<6500	No	2.1	No	Yes	0.3	0.3	No	Fair		No	No	No	No	No	No	No	No	Yes
206	Jim Walker	160.00	US 395	31	Undev.	6-9	<6500	Yes	1.8	Yes	Yes	0.3	0.3	No	Fair	No	No	M	Yes	Yes	No	M	No	M	
296	Billy (Dah G	160.00	US 395	18	Undev.	0-6	<6500	No	1.0	Yes	Yes	0.7	0.7	No	Fair	No	No	M	Yes	Yes	No	M	No	M	
297	Lady Johnsa	120.00	US 395	54	Undev.	0-6	<6500	No	1.0	Yes	Yes	0.4	0.4	No	Fair	V. Poor	No	Yes	Yes	Yes	No	M	No	M	
205	Sussie Ming	160.00	US 395	9	Undev.	0-6	<6500	Yes	0.05	Yes	Yes	0.1	0.1	No	Fair	V. Poor	No	Yes	Yes	Yes	Yes	Yes	M	M	
202	Capt Jim or	160.00	US 395	83	Undev.	0-6	<6500	Yes	0.05	Yes	Yes	0.1	0.1	No	Fair	V. Poor	No	Yes	Yes	Yes	Yes	Yes	M	M	
203	Sussie (No.)	160.00	US 395	108	Undev.	>20	<6500	Yes	0.5	Yes	No	0.4	0.4	No	M	V. Poor	No	No	No	M	No	No	No	No	
215	Billie Miles c	118.91	US 395	37	Undev.	>20	6500	No	1.5	No	No	1.2	1.2	Marginal	V. P.		No	No	No	No	No	No	No	No	Yes
216	Maggie Mile	160.00	US 395	6	Undev.	>20	>6500	No	2.2	No	No	1.4	1.4	Yes	V. P.		No	No	No	No	No	No	No	No	Yes
217	Del Lush	160.00	US 395	141	Undev.	12-20	>6500	Yes	2.8	No	Marginal	1.8	1.8	Yes	V. P.		No	No	No	No	No	No	No	No	Yes
250	Molly Jonah	160.00	US 395	63	Undev.	>20	<6500	No	>5.0	No	No	>2.0	>2.0	Marginal	Fair		No	No	No	No	No	No	No	No	Yes
246	Maggie Nye	120.00	US 395	57	Undev.	>20	<6500	No	3.8	No	No	>2.0	>2.0	No	Fair		No	No	No	No	No	No	No	No	Yes
241	Aggie Dick	160.00	US 395	95	Undev.	9-12	<6500	Yes	3.3	Marginal	Marginal	>2.0	>2.0	No	Fair	V. Poor	No	No	No	M	No	No	No	M	
221	Sam Jake	160.00	US 395	19	Undev.	12-20	<6500	Yes	3.1	No	Marginal	>2.0	>2.0	No	Fair		No	No	No	No	No	No	No	No	Yes
266	Mah-Hut Ch	160.00	US 395	13	Undev.	12-20	6500	No	>2.5	No	Marginal	1.8	1.8	Marginal	Fair		No	No	No	No	No	No	No	No	Yes
298	Billy Cornbr	160.00	US 395	35	Undev.	>20	6500	No	2.1	No	No	1.4	1.4	Marginal	Fair		No	No	No	No	No	No	No	No	Yes
211	Epham or P	120.00	US 395	80	Undev.	>20	6500	No	1.7	No	No	0.9	0.9	Marginal	Fair		No	No	No	No	No	No	No	No	Yes
207	Dow-Dom-A	160.00	US 395	80	Undev.	9-12	<6500	No	0.6	Marginal	Marginal	0.5	0.5	No	Fair	V. Poor	No	No	M	Yes	No	No	No	No	
204	Ta Ga Ga N	160.00	US 395	9	Undev.	0-6	<6500	Yes	0.05	Yes	Yes	0.1	0.1	No	Fair	V. Poor	No	Yes	Yes	Yes	Yes	Yes	M	No	
257	Charley Sha	160.00	US 395	25	Undev.	9-12	<6500	Yes	0.05	Yes	Marginal	0.1	0.1	No	M	No	No	No	M	Yes	No	No	No	No	
258	Lizzie Shaw	120.00	US 395	25	Undev.	6-9	6500	Yes	2.0	No	Yes	0.5	0.5	Marginal	V. P.		No	No	No	No	No	No	No	No	Yes
285	Charley Nev	159.13	US 395	31	Undev.	>20	>6500	No	2.4	No	No	1.0	1.0	Yes	V. P.		No	No	No	No	No	No	No	No	Yes
286	Annie Nevis	160.00	US 395	31	Undev.	>20	>6500	No	1.4	No	No	1.4	1.4	Yes	V. P.		No	No	No	No	No	No	No	No	Yes
222	Nancy Jake	160.00	US 395	35	Undev.	>20	<6500	No	3.7	No	No	>2.0	>2.0	No	Fair		No	No	No	No	No	No	No	No	Yes
267	Kitty Dressl	160.00	US 395	13	Undev.	6-9	>6500	No	>4.0	No	Yes	2.0	2.0	Yes	Fair		No	No	No	No	No	No	No	No	Yes
299	Mary Cornb	160.00	US 395	95	Undev.	6-9	>6500	No	3.5	No	Yes	1.6	1.6	Yes	Fair		No	No	No	No	No	No	No	No	Yes
291	Ben James	160.00	US 395	55	Undev.	12-20	>6500	No	2.0	No	Marginal	1.2	1.2	Yes	Fair		No	No	No	No	No	No	No	No	Yes
208	Sussie Holb	120.00	US 395	17	Undev.	>20	6500	No	1.5	No	No	0.8	0.8	Marginal	Fair		No	No	No	No	No	No	No	No	Yes
260	Mamie Sha	160.00	US 395	13	Undev.	>20	6500	Yes	2.6	No	No	0.3	0.3	Marginal	Fair		No	No	No	No	No	No	No	No	Yes
305	Ar-Bo-Jun A	157.43	US 395	26	Undev.	9-12	>6500	Yes	2.8	No	Marginal	0.7	0.7	Yes	Fair		No	No	No	No	No	No	No	No	Yes
306	Maggie Gec	160.00	US 395	37	Undev.	12-20	>6500	No	3.5	No	Marginal	1.3	1.3	Yes	Fair		No	No	No	No	No	No	No	No	Yes
243	John Dick	160.00	US 395	8	Undev.	9-12	<6500	Yes	>4.0	No	Marginal	>2.0	>2.0	No	Fair		No	No	No	No	No	No	No	No	Yes
223	Judy Jake	160.00	US 395	40	Undev.	>20	<6500	No	>4.0	No	No	>2.0	>2.0	No	Fair		No	No	No	No	No	No	No	No	Yes
268	Ordv Dressl	160.00	US 395	13	Undev.	6-9	>6500	No	>4.0	No	Yes	>2.0	>2.0	Yes	Fair		No	No	No	No	No	No	No	No	Yes
300	Ed. Cornbre	160.00	US 395	27	Undev.	9-12	>6500	No	3.5	No	Marginal	1.9	1.9	Yes	Fair		No	No	No	No	No	No	No	No	Yes

Table 2
LAND USE ASSESSMENT MATRIX

ALLOTMENT DATA						PHYSICAL CHARACTERISTICS										HIGHEST & BEST USE									
Allotment No.	Allotment Name	Size (acres)	Location	No. of Owners	Current Land Use	Topography		Accessibility		Developable (yes/no)	Public Services & Health & Safety			Cultural Res.	Natural Resources			Commercial Residential			Commercial Investment			Comm. Rec.	Other
						Slope (%)	Altitude	Existing Road	Miles from paved road		Sewage Treatment	Proximity to Power (miles)	Proximity to Communications (mi.)		Groundwater Potential	Soils Suitability for development*	Identified Mineral Resources	High Density (subdivision)	Medium Density	Low Density (rural)	Highway Retail	Neighborhood Services	Light Industrial	Destination	Natural Resource Management Area (timber, pine nuts, grazing, etc.)
292	Maggie Jam	160.00	US 395	47	Undev.	>20	>6500	No	2.2	No	No	1.6	1.6	Yes	Fair		No	No	No	No	No	No	No	No	Yes
209	Dick Doc-M	160.00	US 395	20	Undev.	>20	6500	No	1.5	No	No	1.2	1.2	Marginal	Fair		No	No	No	No	No	No	No	No	Yes
244	Jennie Dick	124.74	US 395	52	Undev.	12-20	<6500	Yes	>4.0	No	Marginal	>2.0	>2.0	No	Fair		No	No	No	No	No	No	No	No	Yes
224	Liddie Jake	161.00	US 395	3	Undev.	>20	>6500	No	>4.0	No	No	>2.0	>2.0	Yes	Fair		No	No	No	No	No	No	No	No	Yes
281	George or Y	160.71	US 395	10	Undev.	12-20	>6500	No	>4.0	No	Marginal	>2.0	>2.0	Yes	Fair		No	No	No	No	No	No	No	No	Yes
301	McCarty Co	160.09	US 395	47	Undev.	>20	>6500	No	>4.0	No	No	>2.0	>2.0	Yes	Fair		No	No	No	No	No	No	No	No	Yes
474	Mah-Homa	159.60	US 395	2	Undev.	>20	>6500	No	>4.0	No	No	2.0	2.0	Yes	Fair		No	No	No	No	No	No	No	No	Yes
210	Jane Dick	159.20	US 395	3	Undev.	>20	>6500	No	2.2	No	No	1.5	1.5	Yes	Fair		No	No	No	No	No	No	No	No	Yes
283	Jackie Geor	116.33	US 395	10	Undev.	>20	>6500	No	>5.0	No	No	>2.0	>2.0	Yes	Fair		No	No	No	No	No	No	No	No	Yes
282	Geni Georg	160.00	US 395	7	Undev.	>20	>6500	No	>5.0	No	No	>2.0	>2.0	Yes	Fair		No	No	No	No	No	No	No	No	Yes
475	Ammie Geo	160.00	US 395	141	Undev.	12-20	>6500	No	>4.0	No	Marginal	>2.0	>2.0	Yes	Fair		No	No	No	No	No	No	No	No	Yes
687	Meddie Lute	160.00	US 395	48	Undev.	>20	>6500	No	>5.0	No	No	1.7	1.7	Yes	Fair		No	No	No	No	No	No	No	No	Yes
284	Sam (Twent	156.12	US 395	160	Undev.	>20	>6500	No	>5.0	No	No	>2.0	>2.0	Yes	Fair		No	No	No	No	No	No	No	No	Yes
689	Neenie Lute	160.00	US 395	46	Undev.	>20	>6500	No	>5.0	No	No	>2.0	>2.0	Yes	Fair		No	No	No	No	No	No	No	No	Yes
688	Jack Lutemb	160.00	US 395	49	Undev.	12-20	>6500	No	>4.0	No	Marginal	1.9	1.9	Yes	Fair		No	No	No	No	No	No	No	No	Yes
736	Silver Mt. Ja	159.46	US 395	19	Undev.	>20	>6500	No	>5.0	No	No	>2.0	>2.0	Yes	Fair		No	No	No	No	No	No	No	No	Yes
728	Indian Nettie	160.00	US 395	20	Undev.	>20	>6500	No	>4.5	No	No	>2.0	>2.0	Yes	Fair		No	No	No	No	No	No	No	No	Yes
724	Tom Walker	160.00	US 395	19	Undev.	>20	>6500	No	4.0	No	No	1.9	1.9	Yes	Fair		No	No	No	No	No	No	No	No	Yes
735	Pete Dick	160.00	US 395	15	Undev.	6-9	>6500	No	3.3	No	Yes	1.7	1.7	Yes	V. P.		No	No	No	No	No	No	No	No	Yes
708	Susie	160.00	Car. R.	102	Undev.	12-20	<6500	No	>2.0	No	Marginal	>2.0	>2.0	No	V. P.		No	No	No	No	No	No	No	No	Yes
707	Joe Onang	160.00	Car. R.	144	Undev.	6-9	<6500	No	>2.0	No	Yes	>2.0	>2.0	No	V. P.		No	No	No	No	No	No	No	No	Yes
Total Ac.		22987.91	US 395 Allotments																						
* Soils analysis was performed only on allotments determined to be developable																									
Partitioned Allotments																									
10 Allotments			North																						
16 Allotments			NE				Good Suitability			58		9028.28	Acres	Developable											
150 Allotments			US 395				Fair			7		1108.80	Acres	Developable											
176 Total Allotments							Poor			15		2313.55	Acres	Marginal											
							Very Poor			0		0.00	Acres												
							Not Developable			96		14679.28	Acres	Not Developable											
Total Ac.		27129.91																							
										176		27129.91	Ac. Total												

APPENDIX A

Soil Suitability Analysis

APPENDIX A

Soil Suitability Analysis

The BIA and the USDA Natural Resources Conservation Service (NRCS) recently completed a Rangeland Resource Inventory for the Pine Nut Allotments that included a soils study. This study (*Pine Nut Allotments Rangeland Resource Inventory, Final Report*, December 2007) rated the suitability of the various soil types to support differing uses. Numerous categories were evaluated in the resource inventory. However, for purposes of this soil suitability analysis, only those use categories identified as applicable to supporting development were evaluated. These were:

- **Building Site Development Suitability**
 - Corrosion of Concrete
 - Lawns & Landscaping
 - Golf Fairways
 - Local Roads & Streets
 - Shallow Excavations
 - Dwellings & Small Commercial Buildings
- **Construction Materials**
 - Sources of Gravel
 - Sources of Roadfill
 - Source of Sand
 - Source of Reclamation Material
 - Source of Topsoil
- **Land Management**
 - Off Trail & Road Erosion Hazard
 - On Trail & Road Erosion Hazard
 - Suitability for Roads (natural surface)
- **Recreational Development**
 - Camp Areas, Picnic Areas, & Playgrounds
 - Paths, Trails, & Motorcycle Trails
- **Sanitary Facilities**
 - Suitability for Septic Tank Absorption Fields
 - Suitability for Sewage Lagoons

Methodology

Utilizing the NRCS report, those 80 allotments previously determined to be suitable for development were evaluated as to soil suitability to support development. The 80 allotments included 10 allotments in the Northern group, 16 allotments in the Northeast group, and 54 allotments along the Highway 395 corridor.

With the exception of a small number of allotments, most are composed of two or more soil types. The approximate percentages of various soil types were estimated for each allotment. Table A-1, at the end of this appendix, shows the allotments, the percentage of soil type, and the

suitability ratings. For those with multiple soils, an overall suitability was estimated based on the percentages. See Figure A-1 for overall soils suitability for the 80 developable allotments.

For residential, commercial, and light industrial development, six critical suitability factors were evaluated. These included:

- Local Roads and Streets
- Shallow Excavations
- Dwellings and Small Commercial Buildings
- Source of Roadfill
- Septic Tank Absorption Fields
- Sewage Lagoons

These factors are very critical as they have a direct correlation to the cost of development. As the soil suitability decreases, costs for development increase. For example, shallow soil depth requires rock excavation for building foundations and for construction roads, and poor soils for sewage absorption fields means some type of community system, and if soils are not suitable for lagoons, some type of treatment process would be required, all of which add considerable cost to development projects, which in turn directly affect a developer's ability to compete in the market place.

Based on these factors, an overall soils suitability rating was applied to each of the 80 allotments (those previously determined to be developable) to determine the capability of the soils to support development. Rating categories included good, fair, poor, very poor, and unsuitable. Good and fair ratings afford development opportunities. A poor rating is marginal, although some mitigation may be possible. Allotments with very poor and unsuitable ratings would require very expensive mitigation and are unlikely to be considered by a developer.

Findings

Overall, soil suitability for construction of buildings and for subsurface sewage disposal or construction of sewage lagoons is not very good. Not one allotment had an overall rating of "good" for either category of sewage disposal. These suitability categories are primary concerns to a developer in rural areas as poor soils increases construction costs, particularly when rock excavation is required and when sewage treatment plants are necessary.

North Allotments

Overall building suitability in the North Allotments ranges from fair to very poor with 2 allotments rated fair, 2 rated poor, and 6 rated very poor. In general, soils suitability for shallow excavations and for construction of dwellings or commercial structures is not particularly good. Only a few soil types have good or fair suitability ratings. Also, ratings for community sewage lagoons are very poor in this area. However, a number of soils have fair suitability ratings for septic tank drainfields. As a result, large lot development, similar to that which has occurred to the west of these allotments, with individual septic tanks with drainfields

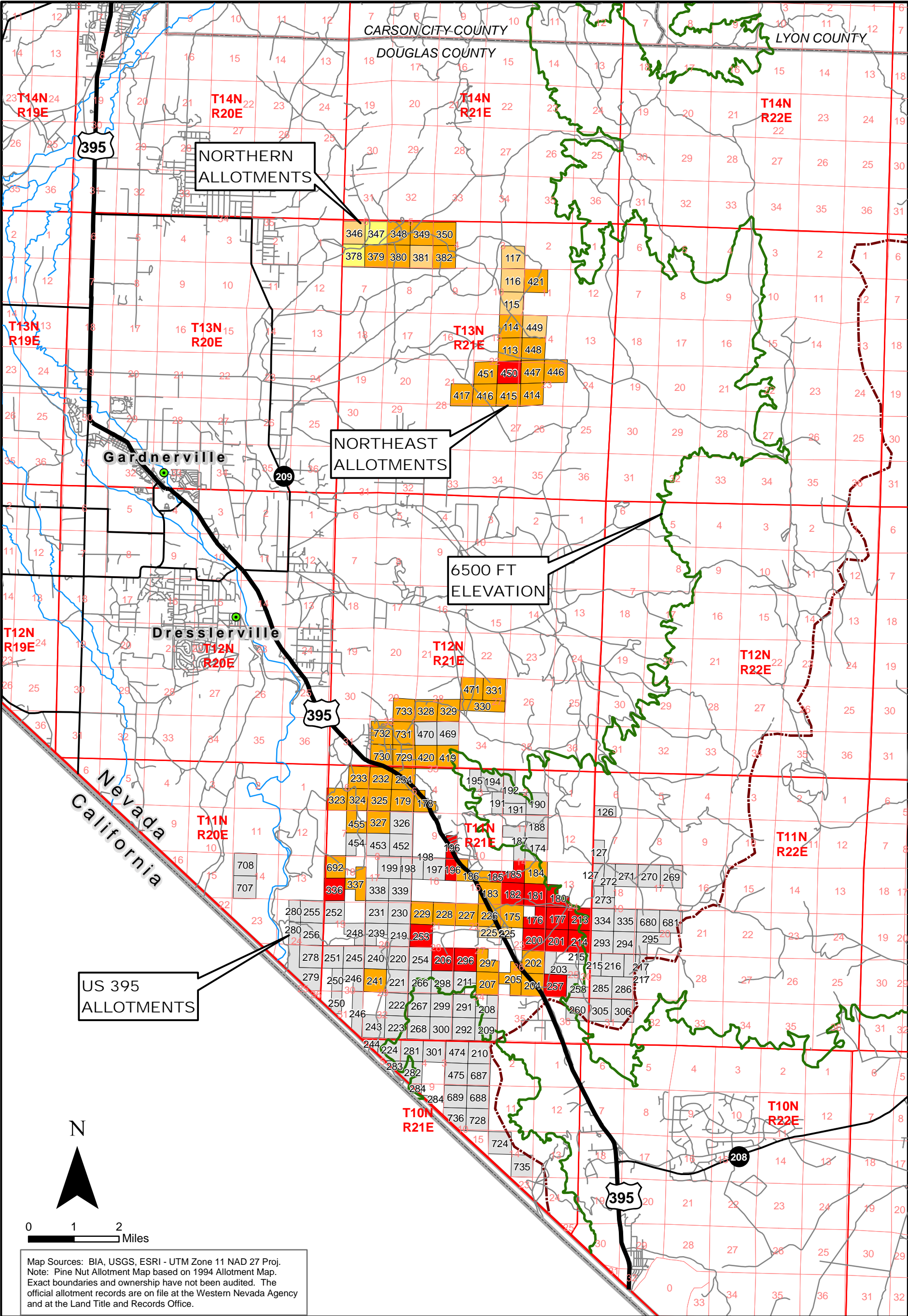


Figure A-1

Soils Suitability For Development

Pine Nut Allotments, Douglas County, Nevada

Map Prepared by Cascade Design Professionals, Inc., Jan. 2009

- Legend**

 - 6500 Ft. El.
 - Local Road
 - Carson River Watershed Boundary
 - 50 Meter Contours
- Soil Suitability**

 - Fair
 - Poor
 - Very Poor
 - Not Suitable
 - Not Considered Developable

may be possible in some areas. Otherwise, community wastewater treatment facilities probably will be necessary and will increase the cost of development.

Soils suitability for constructing roads and for road fill are better although individual soil types run the gamut from good to unsuitable. In particular, road fill suitability is considerably better with a number of soils having a “good” rating.

Northeast Allotments

Overall building suitability in the Northeast Allotments ranges from fair to not suitable with 4 allotments rated poor, 11 rated very poor, and one rated not suitable. Soil problems in this area are similar to the North Allotments—very poor suitability for shallow excavations and for dwellings and small commercial structures. Likewise, there are some soil types where septic tank drainfields will probably be possible, but community lagoon systems will be unlikely unless suitable soils are imported.

Soils suitability for constructing roads and for road fill is similar to the North Allotments and runs the gamut from good to unsuitable. In particular, road fill suitability is better with a number of soils having a “good” or “fair” rating.

Highway 395 Corridor Allotments

Because of the steeper terrain, soil conditions in this area are even less desirable for development. Of the 54 allotments that have development potential, almost all are rated either very poor or not suitable. One has a poor rating, 37 are rated very poor, and 16 are not suitable for development. One of the biggest development cost factors will be sewage treatment systems in this area as almost uniformly the soils are not suitable for either septic tank drainfields or for community lagoon systems. As was the case with the Pine View development, wastewater treatment plants most likely will be required. Also, soil suitability for shallow excavation and for dwellings and small scale commercial developments is not very good and will be a problem in areas where slopes increase.

Soils suitability for roads and roadfill are not as good as in the northern allotment areas. Most soils have a “very poor” rating for road construction although there are a few with “fair” and “poor” ratings. Ratings for roadfill are better with a number of soil types that have “good” or “fair” ratings. Overall, however, the vast majority of soils have a “poor” rating. Road construction will definitely be more difficult in this area and will increase development costs.

Conclusions

Soils in the North and Northeast Allotment areas are a little more conducive to development than the Highway 395 Allotments. The North and Northeast Allotments, being in the valley area, generally do not have the slope and erosion problems that are prevalent in the mountainous Highway 395 Corridor, and therefore have more soil depth and less bedrock problems. Also, in these two areas, large lot development on individual septic tanks with drainfields may be possible in some areas.

Even though the soils are not the best for development, it should be noted that development has occurred in some marginally suitable areas. The soil suitability on the allotment where the Pine View Estates are located was not particularly suitable, as seen by the need for a wastewater treatment facility, which significantly increased the cost of development. Also east of the North Allotments, rural residential development has occurred, although at a very low density, in similar soil situations.

Soil problems can be overcome, but it adds to the cost of development and impacts the overall feasibility of a proposed development. Ultimately, local market conditions determine whether the costs of development are warranted to maintain competitiveness in the market place.

Table A-1
SOILS SUITABILITY MATRIX

ALLOTMENT DATA						PHYSICAL CHARACTERISTICS																											
						Predominant Soil Types		Soil Suitability Category																									
								Building Site Development							Construction Materials					Land Management			Recreational Development		Sanitary Facilities		Development with Wastewater Treatment System	Development with Septic Tank Drainfield	Development with Community Wastewater Lagoons	Overall Soil Suitability Rating for Allotment for Development			
Soil Number	Percentage of Allotment	Corrosion of Concrete	Lawns & Landscaping	Golf Fairways	Local Roads & Streets	Shallow Excavations	Dwellings and Small Commercial Buildings	Source of Gravel	Source of Roadfill	Source of Sand	Source of Reclamation Material	Source of Topsoil	Off Trail & Road Erosion Hazard	On Trail & Road Erosion Hazard	Suitability For Roads (Natural Surface)	Camp Areas & Picnic Areas	Paths, Trails, & Motorcycle Trails	Septic Tank Absorption Fields	Sewage Lagoons														
346	Deve Mo Sh	148.80	North	10	Undev.	891	90	Good	V. Poor	V. Poor	Poor	Poor	Poor	Poor	Good	Fair	Fair	V. Poor	No	V. Poor	No	Poor	Poor	V. Poor	Poor								
347	Mary Dick	161.30	North	10	Undev.	392	15	Good	Fair	Good	Fair	No	No	Poor	Good	Fair	Fair	Poor	Fair	Fair	No	V. Poor											
						393	15	Good	Good	Fair	Fair	No	No	Poor	Good	Fair	Fair	Good	Fair	Fair	Poor	Fair	Fair	V. Poor									
						483	10	Good	V. Poor	V. Poor	No	V. Poor	V. Poor	Fair	Poor	Fair	Poor	Good	Fair	Fair	Poor	Poor	No	V. Poor									
						982	35	Good	Good	Good	Fair	Fair	V. Poor	Poor	Fair	Poor	Fair	Good	Good	Good	Fair	V. Poor	Fair	Fair	Fair								
Ave. Soil Suitability Rating for Category						Good	Good	Fair	Fair	Poor	Poor	Poor	Fair	Poor	Fair	Fair	Good	Good	Fair	Poor	Fair	Fair	Poor	Fair	Fair	Fair	Fair	Fair	Fair				
348	Wallace Dick	161.45	North	10	Undev.	393	10	Good	Good	Fair	Fair	No	No	Poor	Good	Fair	Fair	Fair	Good	Fair	Fair	Poor	Fair	Fair	V. Poor								
						483	85	Good	V. Poor	V. Poor	No	V. Poor	V. Poor	Fair	Poor	Fair	Poor	Poor	Good	Fair	Fair	Poor	Poor	No	V. Poor								
Ave. Soil Suitability Rating For Category						Good	Poor	V. Poor	V. Poor	V. Poor	V. Poor	Fair	Poor	Fair	Poor	Poor	Good	Fair	Fair	Poor	Poor	V. Poor	V. Poor	V. Poor	V. Poor	V. Poor	V. Poor	V. Poor	V. Poor				
349	Walking Dic	160.93	North	10	Undev.	181	20	Good	V. Poor	V. Poor	V. Poor	V. Poor	V. Poor	Poor	Poor	Poor	Poor	Poor	Fair	Poor	V. Poor	V. Poor	Fair	No	No								
						183	50	Good	V. Poor	V. Poor	No	V. Poor	V. Poor	Poor	Poor	Poor	Poor	Poor	Good	Poor	Fair	V. Poor	Fair	No	V. Poor								
						483	15	Good	V. Poor	V. Poor	No	V. Poor	V. Poor	Fair	Poor	Fair	Poor	Poor	Good	Fair	Good	Poor	Poor	No	V. Poor								
						781	15	Good	Fair	Fair	V. Poor	V. Poor	V. Poor	Fair	Poor	Fair	Poor	Poor	Good	Fair	Good	V. Poor	Good	No	V. Poor								
Ave. Soil Suitability Rating For Category						Good	V. Poor	Poor	No	V. Poor	V. Poor	Poor	Poor	Poor	Poor	Poor	Good	Poor	Fair	V. Poor	Fair	No	V. Poor	V. Poor	V. Poor	V. Poor	V. Poor	V. Poor					
350	Joe Dick	160.72	North	10	Undev.	685	95	Good	V. Poor	V. Poor	V. Poor	Poor	V. Poor	Poor	Poor	Poor	Poor	Poor	Fair	Poor	V. Poor	V. Poor	Fair	No	No	V. Poor	No	No	V. Poor				
378	LittleCharley	148.80	North	24	Undev.	181	15	Good	V. Poor	V. Poor	V. Poor	V. Poor	V. Poor	Poor	Poor	Poor	Poor	Poor	Fair	Poor	V. Poor	V. Poor	Fair	Fair	No								
						392	10	Good	Fair	Good	Fair	No	No	Poor	Good	Fair	Fair	Fair	Good	Good	Fair	Poor	Fair	Fair	Fair	V. Poor							
						611	15	Good	Good	Good	Fair	No	Good	Poor	Good	Fair	Fair	Fair	Good	Good	Good	Fair	Good	No	No								
						612	15	Good	Good	Good	Fair	No	Good	Poor	Good	Fair	Fair	Fair	Good	Fair	Fair	Fair	Good	No	V. Poor								
						832	20	Good	Fair	Fair	Fair	No	V. Poor	Poor	Good	Fair	Poor	Fair	Good	Fair	Fair	No	No	Fair	V. Poor								
						982	10	Good	Good	Good	Fair	Fair	V. Poor	Poor	Fair	Poor	Fair	Good	Good	Good	Fair	V. Poor	Fair	Fair	Fair								
Ave. Soil Suitability Rating For Category						Good	Good	Fair	Fair	V. Poor	Fair	Poor	Fair	Fair	Fair	Good	Fair	Fair	Poor	Fair	Poor	V. Poor	Fair	Fair	Fair	Fair	Fair						
379	Susie Charli	160.00	North	24	Undev.	392	25	Good	Fair	Good	Fair	No	No	Poor	Good	Fair	Fair	Fair	Good	Good	Fair	Poor	Fair	Fair	V. Poor	Fair	Fair	Poor	Fair				
						481	15	Good	No	No	No	No	V. Poor	Fair	Poor	Fair	Poor	Poor	Good	Good	Fair	Poor	Good	No	No								
						483	50	Good	V. Poor	V. Poor	No	V. Poor	V. Poor	Fair	Poor	Fair	Poor	Poor	Good	Fair	Fair	Poor	Poor	No	V. Poor								
Ave. Soil Suitability Rating for Category						Good	Poor	Poor	V. Poor	V. Poor	V. Poor	Fair	Fair	Fair	Poor	Poor	Good	Fair	Fair	Poor	Fair	V. Poor	V. Poor	V. Poor	V. Poor	V. Poor	V. Poor						
380	Wm Dave Tl	160.00	North	24	Undev.	483	90	Good	V. Poor	V. Poor	No	V. Poor	V. Poor	Fair	Poor	Fair	Poor	Poor	Good	Fair	Fair	Poor	Poor	No	V. Poor	V. Poor	No	V. Poor	V. Poor				
381	Saddle Tond	160.00	North	24	Undev.	181	65	Good	V. Poor	V. Poor	V. Poor	V. Poor	V. Poor	Poor	Poor	Poor	Poor	Poor	Fair	Poor	V. Poor	V. Poor	Fair	Fair	No								
						392	15	Good	Fair	Good	Fair	No	No	Poor	Good	Fair	Fair	Fair	Good	Good	Fair	Poor	Fair	Fair	V. Poor								
						481	15	Good	No	No	No	No	V. Poor	Fair	Poor	Fair	Poor	Poor	Good	Good	Fair	Poor	Good	No	No								
Ave. Soil Suitability Rating for Category						Good	V. Poor	V. Poor	V. Poor	V. Poor	V. Poor	Poor	Poor	Poor	Poor	Poor	Fair	Fair	Poor	V. Poor	Fair	Fair	No	Poor	Poor	No	Poor						
382	Willie Tondy	160.00	North	15	Undev.	181	20	Good	V. Poor	V. Poor	V. Poor	V. Poor	V. Poor	Poor	Poor	Poor	Poor	Poor	Fair	Poor	V. Poor	V. Poor	Fair	Fair	No								
						392	20	Good	Fair	Good	Fair	No	No	Poor	Good	Fair	Fair	Fair	Good	Good	Fair	Poor	Fair	Fair	V. Poor								
						393	10	Good	Good	Fair	Fair	No	No	Poor	Good	Fair	Fair	Fair	Good	Fair	Fair	Poor	Fair	Fair	V. Poor								
						481	30	Good	No	No	No	No	V. Poor	Fair	Poor	Fair	Poor	Poor	Good	Good	Fair	Poor	Good	No	No								
						483	30	Good	V. Poor	V. Poor	No	V. Poor	V. Poor	Fair	Poor	Fair	Poor	Poor	Good	Fair	Fair	Poor	Poor	No	V. Poor								
Ave. Soil Suitability Rating for Category						Good	V. Poor	V. Poor	V. Poor	V. Poor	V. Poor	Poor	Fair	Fair	Poor	Poor	Good	Fair	Fair	Poor	Fair	Poor	V. Poor	V. Poor	V. Poor	V. Poor	V. Poor						
117	Sussie Jim	160.00	NE	13	Undev.	833	100	Good	V. Poor	V. Poor	Fair	No	V. Poor	Poor	Good	Fair	Poor	Fair	Good	Fair	Fair	V. Poor	Poor	Fair	V. Poor	Poor	Poor	V. Poor	Poor				
116	Louis Jim ol	160.00	NE	27	Undev.	181	40	Good	V. Poor	V. Poor	V. Poor	V. Poor	V. Poor	Poor	Poor	Poor	Poor	Poor	Fair	Poor	V. Poor	V. Poor	Fair	Fair	No								
						382	20	Fair	Poor	Poor	Poor	No	Fair	Poor	Good	Fair	Fair	Fair	Good	Fair	Fair	Good	No	V. Poor									
						833	40	Good	V. Poor	V. Poor	Fair	No	V. Poor	Poor	Good	Fair	Poor	Fair	Good	Fair	Fair	V. Poor	Poor	Fair	V. Poor								
Ave. Soil Suitability Rating for Category						Good	V. Poor	V. Poor	Poor	No	Poor	Poor	Fair	Fair	Poor	Fair	Fair	Poor	Poor	Poor	Poor	V. Poor	V. Poor	Poor	Poor	V. Poor	Poor						
421	Daw-Lah-Lu	160.00	NE	15	Undev.	833	95	Good	V. Poor	V. Poor	Fair	No	V. Poor	Poor	Good	Fair	Poor	Fair	Good	Fair	Fair	V. Poor	Poor	Fair	V. Poor	V. Poor	V. Poor	V. Poor					
115	John Charle	160.00	NE	27	Undev.	181	40	Good	V. Poor	V. Poor	V. Poor	V. Poor	V. Poor	Poor	Poor	Poor	Poor	Poor	Fair	Poor	V. Poor	V. Poor	Fair	Fair	No								
						382	60	Fair	Fair	Fair	Poor	No	Fair	Poor	Good	Fair	Fair	Fair	Good	Fair	Fair	Good	No	V. Poor									
Ave. Soil Suitability Rating for Category						Fair	Poor	Poor	Poor	No	Poor	Poor	Fair	Fair	Fair	Fair	Poor	Poor	Poor	Poor	Poor	V. Poor	V. Poor	Poor	Poor	V. Poor	Poor						
114	Maggie Jim	160.00	NE	27	Undev.	181	10	Good	V. Poor	V. Poor	V. Poor	V. Poor	V. Poor	Poor	Poor	Poor	Poor	Fair	Poor	V. Poor	V. Poor	Fair	Fair	No									
						382	85	Fair	Fair	Fair	Poor	No	Fair	Poor	Good	Fair	Fair	Fair	Good	Fair	Fair	Good	No	No	V. Poor								
						Ave. Soil Suitability Rating for Category						Fair	Poor	Poor	Poor	No	Poor	Poor	Good	Fair	Fair	Fair	Good	Fair	Fair	V. Poor	V. Poor	Poor	V. Poor	V. Poor	V. Poor		
449	Sussie Jim	160.00	NE	38	Undev.	181	80	Good	V. Poor	V. Poor	V. Poor	V. Poor	V. Poor	Poor	Poor	Poor	Poor	Poor	Fair	Poor	V. Poor	V. Poor	Fair	Fair	No								
						382	20	Fair	Fair	Fair	Poor	No	Fair	Poor	Good	Fair	Fair	Fair	Good	Fair	Fair	Good	No	No	V. Poor								
						Ave. Soil Suitability Rating for Category						Good	V. Poor	V. Poor	V. Poor	V. Poor	Poor	Poor	Fair	Poor	Poor	Poor	Fair	Poor	Poor	Poor	No	Poor	Poor	V. Poor	Poor		
113	Jim Iaciah	160.00	NE	27	Undev.	685	95	Good	V. Poor	V. Poor	V. Poor	V. Poor	V. Poor	Poor	Poor	Poor	Poor	Poor	Fair	Poor	V. Poor	V. Poor	Fair	V. Poor	No	V. Poor	V. Poor	No	V. Poor				
448	Old Jim or A	160.00	NE	38	Undev.	181	10	Good	V. Poor	V. Poor	V. Poor	V. Poor	V. Poor	Poor	Poor	Poor	Poor	Poor	Fair	Poor	V. Poor	V. Poor	Fair	Fair	No								
						685	85	Good	V. Poor	V. Poor	V. Poor	V. Poor	V. Poor	Poor	Poor	Poor	Poor	Poor	Fair	Poor	V. Poor	V. Poor	Fair	V. Poor	No								
Ave. Soil Suitability Rating for Category						Good	V. Poor	V. Poor	V. Poor	V. Poor	V. Poor	Poor	Poor	Poor	Poor	Poor	Fair	Poor	V. Poor	V. Poor		Poor	No	V. Poor	V. Poor	No	V. Poor						
451	Mogan Dave	160.00	NE	14	Undev.	181	10	Good	V. Poor	V. Poor	V. Poor	V. Poor	V. Poor	Poor	Poor	Poor	Poor	Poor	Fair	Poor	V. Poor	V. Poor	Fair	Fair	No								
						481	15	Good	No	No	No	No	V. Poor	Fair	Poor	Fair	Poor	Poor	Good	Good	Fair	Poor	Good	No	No								
						Ave. Soil Suitability Rating for Category						Good	No	No	No	No	V. Poor	Fair	Poor	Poor	Poor	Good	Good	Fair	Poor	Good	No	No					

Table A-1
SOILS SUITABILITY MATRIX

ALLOTMENT DATA						PHYSICAL CHARACTERISTICS																									
						Predominant Soil Types		Soil Suitability Category																							
								Building Site Development						Construction Materials						Land Management		Recreational Development		Sanitary Facilities		Development with Wastewater Treatment System	Development with Septic Tank Drainfield	Development with Community Wastewater Lagoons	Overall Soil Suitability Rating for Allotment for Development		
Allotment No.	Allotment Name	Size (acres)	Location	No. of Owners	Current Land Use	Soil Number	Percentage of Allotment	Corrosion of Concrete	Lawns & Landscaping	Golf Fairways	Local Roads & Streets	Shallow Excavations	Dwellings and Small Commercial Buildings	Source of Gravel	Source of Roadfill	Source of Sand	Source of Reclamation Material	Source of Topsoil	Off Trail & Road Erosion Hazard	On Trail & Road Erosion Hazard	Suitability For Roads (Natural Surface)	Camp Areas & Picnic Areas	Paths, Trails, & Motorcycle Trails	Septic Tank Absorption Fields	Sewage Lagoons						
						482	35	Good	V. Poor	V. Poor	V. Poor	V. Poor	V. Poor	V. Poor	Fair	Poor	Fair	Poor	Poor	Good	V. Poor	Fair	V. Poor	Good	V. Poor	No					
						483	30	Good	V. Poor	V. Poor	V. Poor	No	V. Poor	V. Poor	Fair	Poor	Fair	Poor	Poor	Good	Fair	Fair	V. Poor	Poor	No	V. Poor					
						742	10	Good	V. Poor	V. Poor	V. Poor	No	V. Poor	Poor	Poor	Fair	Poor	Poor	Poor	Poor	V. Poor	V. Poor	V. Poor	V. Poor	No	No					
Ave. Soil Suitability Rating for Category								Good	V. Poor	V. Poor	V. Poor	V. Poor	V. Poor	V. Poor	Fair	Poor	Fair	Poor	Poor	Good	Poor	Fair	V. Poor	Fair	V. Poor	No	V. Poor	V. Poor	V. Poor	V. Poor	
450	Dave or Sol	160.00	NE	24	Undev.	685	95	Good	V. Poor	V. Poor	V. Poor	V. Poor	V. Poor	V. Poor	Poor	Poor	Poor	Poor	Poor	Fair	Poor	V. Poor	V. Poor	V. Poor	Fair	V. Poor	No	No	No	No	
447	Wm Fender	160.00	NE	2	Undev.	685	100	Good	V. Poor	V. Poor	V. Poor	V. Poor	V. Poor	V. Poor	Poor	Poor	Poor	Poor	Poor	Fair	Poor	V. Poor	V. Poor	V. Poor	Fair	V. Poor	No	V. Poor	V. Poor	No	
446	Mary Fender	160.00	NE	2	Undev.	685	100	Good	V. Poor	V. Poor	V. Poor	V. Poor	V. Poor	V. Poor	Poor	Poor	Poor	Poor	Poor	Fair	Poor	V. Poor	V. Poor	V. Poor	Fair	V. Poor	No	V. Poor	V. Poor	No	
417	Mary Jacks	160.00	NE	26	Undev.	482	85	Good	V. Poor	V. Poor	V. Poor	V. Poor	V. Poor	V. Poor	Fair	Poor	Fair	Poor	Poor	Good	V. Poor	Fair	V. Poor	Good	V. Poor	No					
						483	10	Good	V. Poor	V. Poor	No	V. Poor	V. Poor	V. Poor	Fair	Poor	Fair	Poor	Poor	Good	Fair	Fair	Poor	Poor	No	V. Poor					
Ave. Soil Suitability Rating for Category								Good	V. Poor	V. Poor	V. Poor	V. Poor	V. Poor	V. Poor	Fair	Poor	Fair	Poor	Poor	Good	Poor	Fair	V. Poor	Good	V. Poor	No	V. Poor	V. Poor	No	V. Poor	
416	Silas Jacks	160.00	NE	2	Undev.	481	15	Good	No	No	No	No	V. Poor	V. Poor	Fair	Poor	Fair	Poor	Poor	Good	Good	Fair	Poor	Good	No	No					
						482	20	Good	V. Poor	V. Poor	V. Poor	V. Poor	V. Poor	V. Poor	Fair	Poor	Fair	Poor	Poor	Good	V. Poor	Fair	V. Poor	Good	V. Poor	No					
						483	35	Good	V. Poor	V. Poor	No	V. Poor	V. Poor	V. Poor	Fair	Poor	Fair	Poor	Poor	Good	Fair	Fair	Poor	Poor	No	V. Poor					
						784	30	Good	Poor	Poor	V. Poor	V. Poor	No	Fair	Poor	Fair	Poor	Poor	Poor	Good	Good	Fair	V. Poor	Good	No	V. Poor					
Ave. Soil Suitability Rating for Category								Good	V. Poor	V. Poor	V. Poor	V. Poor	V. Poor	V. Poor	Fair	Poor	Fair	Poor	Poor	Good	Fair	Fair	Poor	No	V. Poor	No	V. Poor	V. Poor	No	V. Poor	
415	Calbert Jack	160.00	NE	1	Undev.	482	90	Good	V. Poor	V. Poor	V. Poor	V. Poor	V. Poor	V. Poor	Fair	Poor	Fair	Poor	Poor	Good	V. Poor	Fair	V. Poor	Good	V. Poor	No					
						685	10	Good	V. Poor	V. Poor	V. Poor	V. Poor	V. Poor	V. Poor	Poor	Poor	Poor	Poor	Poor	Fair	Poor	V. Poor	V. Poor	Fair	V. Poor	No					
Ave. Soil Suitability Rating for Category								Good	V. Poor	V. Poor	V. Poor	V. Poor	V. Poor	V. Poor	Fair	Poor	Fair	Poor	Poor	Good	V. Poor	Fair	V. Poor	Good	V. Poor	No	V. Poor	No	V. Poor	V. Poor	
414	Jack Jacks	160.00	NE	1	Undev.	482	85	Good	V. Poor	V. Poor	V. Poor	V. Poor	V. Poor	V. Poor	Fair	Poor	Fair	Poor	Poor	Good	No	Fair	V. Poor	Good	V. Poor	No					
						685	10	Good	V. Poor	V. Poor	V. Poor	V. Poor	V. Poor	V. Poor	Poor	Poor	Poor	Poor	Poor	Fair	Poor	V. Poor	V. Poor	Fair	V. Poor	No					
Ave. Soil Suitability Rating for Category								Good	V. Poor	V. Poor	V. Poor	V. Poor	V. Poor	V. Poor	Fair	Poor	Fair	Poor	Poor	Good	V. Poor	Poor	V. Poor	Good	V. Poor	No	V. Poor	No	V. Poor	V. Poor	
471	Maggie Arth	160.00	US 395	145	Undev.	884	70	Good	Fair	Fair	V. Poor	V. Poor	Fair	Poor	Good	Poor	Fair	Poor	Poor	Good	Fair	Good	Fair	Fair	No	V. Poor					
						923	30	Good	Poor	Poor	Fair	No	V. Poor	Poor	Poor	Fair	Poor	Fair	Poor	Good	Good	V. Poor	Poor	Fair	No	No					
Ave. Soil Suitability Rating for Category								Good	Fair	Fair	Poor	V. Poor	Poor	Poor	Poor	Good	Poor	Fair	Poor	Good	Fair	Fair	Fair	Fair	Fair	No	V. Poor	Poor	V. Poor	V. Poor	
331	Delie Aleck	160.00	US 395	48	Undev.	571	30	Good	V. Poor	V. Poor	V. Poor	V. Poor	No	Fair	Poor	Poor	Poor	Poor	Poor	Fair	V. Poor	No	V. Poor	Poor	No	No					
						923	70	Good	Poor	Poor	Fair	No	V. Poor	Poor	Fair	Poor	Fair	Poor	Poor	Good	Good	V. Poor	Poor	Fair	No	No					
Ave. Soil Suitability Rating for Category								Good	Poor	Poor	Poor	No	V. Poor	Poor	Fair	Poor	Fair	Poor	Fair	Poor	Good	Fair	V. Poor	Poor	Fair	No	No	No	V. Poor	No	No
733	Savere Sn	160.00	US 395	35	Undev.	486	90	Good	V. Poor	V. Poor	V. Poor	V. Poor	V. Poor	V. Poor	Poor	Poor	Fair	Poor	Poor	Good	Poor	Poor	V. Poor	Poor	No	V. Poor					
						487	10	Good	V. Poor	V. Poor	V. Poor	No	V. Poor	Fair	Poor	Fair	Poor	Poor	Poor	Fair	V. Poor	V. Poor	V. Poor	Poor	No	V. Poor					
Ave. Soil Suitability Rating for Category								Good	V. Poor	V. Poor	V. Poor	V. Poor	V. Poor	V. Poor	Poor	Poor	Fair	Poor	Poor	Good	Poor	Poor	V. Poor	Poor	No	V. Poor	V. Poor	No	V. Poor	V. Poor	
328	Aleck or Col	160.00	US 395	5	Undev.	151	75	Good	V. Poor	V. Poor	V. Poor	V. Poor	No	Fair	Poor	Poor	Poor	Poor	Poor	Poor	V. Poor	V. Poor	V. Poor	V. Poor	No	No					
						486	10	Good	V. Poor	V. Poor	V. Poor	V. Poor	V. Poor	V. Poor	Poor	Poor	Fair	Poor	Poor	Good	Poor	Poor	V. Poor	Poor	No	No					
						487	15	Good	V. Poor	V. Poor	V. Poor	No	V. Poor	Fair	Poor	Fair	Poor	Poor	Poor	Fair	V. Poor	V. Poor	V. Poor	Poor	No	V. Poor					
Ave. Soil Suitability Rating for Category								Good	V. Poor	V. Poor	V. Poor	V. Poor	V. Poor	Poor	Fair	Poor	Poor	Poor	Poor	Fair	V. Poor	V. Poor	V. Poor	No	No	No	Poor	V. Poor	V. Poor	V. Poor	
329	Lucy Aleck	160.00	US 395	41	Undev.	151	60	Good	V. Poor	V. Poor	V. Poor	V. Poor	No	Fair	Poor	Poor	Poor	Poor	Poor	Poor	V. Poor	V. Poor	V. Poor	V. Poor	No	No					
						483	20	Good	No	No	No	V. Poor	V. Poor	Fair	Poor	Fair	Poor	Poor	Poor	Good	Fair	Fair	Poor	Poor	No	V. Poor					
						487	20	Good	V. Poor	V. Poor	V. Poor	No	V. Poor	Fair	Poor	Fair	Poor	Poor	Poor	Fair	V. Poor	V. Poor	V. Poor	Poor	No	V. Poor					
Ave. Soil Suitability Rating for Category								Good	V. Poor	V. Poor	V. Poor	V. Poor	V. Poor	V. Poor	Fair	Poor	Fair	Poor	Poor	Poor	Fair	Poor	Poor	V. Poor	Poor	No	V. Poor	V. Poor	No	V. Poor	
330	Minnie Aleck	160.00	US 395	46	Undev.	252	10	Good	V. Poor	V. Poor	V. Poor	V. Poor	V. Poor	V. Poor	Fair	Poor	Poor	Poor	Poor	Poor	Poor	V. Poor	V. Poor	V. Poor	No	No					
						571	15	Good	V. Poor	V. Poor	V. Poor	V. Poor	No	Fair	Poor	Poor	Poor	Poor	Poor	Fair	V. Poor	No	V. Poor	Poor	No	No					
						884	25	Good	Fair	Fair	Fair	No	Fair	Poor	Good	Poor	Fair	Poor	Poor	Good	Fair	Good	Fair	Fair	No	V. Poor					
						923	40	Good	Poor	Poor	Fair	No	V. Poor	Poor	Fair	Poor	Fair	Poor	Poor	Good	Good	V. Poor	Poor	Fair	No	No					
Ave. Soil Suitability Rating for Category								Good	Poor	Poor	Poor	No	Poor	Poor	Poor	Fair	Poor	Fair	Poor	Poor	Fair	Poor	Poor	Poor	Poor	No	No	Poor	V. Poor	V. Poor	V. Poor
732	Josie Snook	160.00	US 395	4	Subdiv.	486	90	Good	V. Poor	V. Poor	V. Poor	V. Poor	V. Poor	V. Poor	Poor	Poor	Poor	Poor	Poor	Good	Poor	Poor	V. Poor	Poor	No	V. Poor					
						487	10	Good	V. Poor	V. Poor	V. Poor	No	V. Poor	Fair	Poor	Fair	Poor	Poor	Poor	Fair	V. Poor	V. Poor	V. Poor	Poor	No	V. Poor					
Ave. Soil Suitability Rating for Category								Good	V. Poor	V. Poor	V. Poor	V. Poor	V. Poor	Poor	Poor	Poor	Fair	Poor	Poor	Good	Poor	Poor	V. Poor	Poor	No	V. Poor	V. Poor	No	V. Poor	V. Poor	
731	Geo Snooks	160.00	US 395	24	Homes	486	100	Good	V. Poor	V. Poor	V. Poor	V. Poor	V. Poor	V. Poor	Poor	Poor	Poor	Poor	Poor	Good	Poor	Poor	V. Poor	Poor	No	V. Poor	V. Poor	No	V. Poor	V. Poor	
730	Tillie Snook	160.00	US 395	14	Homes	486	100	Good	V. Poor	V. Poor	V. Poor	V. Poor	V. Poor	V. Poor	Poor	Poor	Poor	Poor	Poor	Good	Poor	Poor	V. Poor	Poor	No	V. Poor	V. Poor	No	V. Poor	V. Poor	
729	Indian Snoc	162.50	US 395	26	Homes	486	100	Good	V. Poor	V. Poor	V. Poor	V. Poor	V. Poor	V. Poor	Poor	Poor	Poor	Poor	Poor	Good	Poor	Poor	V. Poor	Poor	No	V. Poor	V. Poor	No	V. Poor	V. Poor	
233	Annie Joe	161.08	US 395	7	Undev.	486	100	Good	V. Poor	V. Poor	V. Poor	V. Poor	V. Poor	V. Poor	Poor	Poor	Fair	Poor	Poor	Good	Poor	Poor	V. Poor	Poor	No	V. Poor	V. Poor	No	V. Poor	V. Poor	
232	Little Joe or	161.43	US 395	1	Undev.	251	15	Good	V. Poor	V. Poor	V. Poor	V. Poor	V. Poor	V. Poor	Fair	Poor	Poor	Poor	Poor	Poor	V. Poor	V. Poor	V. Poor	V. Poor	No	V. Poor					
						486	85	Good	V. Poor	V. Poor	V. Poor	V. Poor	V. Poor	V. Poor	Poor	Poor	Fair	Poor	Poor	Good	Poor	Poor	V. Poor	Poor	No	V. Poor					
Ave. Soil Suitability Rating for Category								Good	V. Poor	V. Poor	V. Poor	V. Poor	V. Poor	V. Poor	Fair	Poor	Poor	Poor	Poor	Good	Poor	Poor	V. Poor	Poor	No	V. Poor	V. Poor	No	V. Poor	V. Poor	
234	Maggie Joe	98.10	US 395	2	Subdiv.	251	30	Good	V. Poor	V. Poor	V. Poor	V. Poor	V. Poor	V. Poor	Fair	Poor	Poor	Poor	Poor	Poor	V. Poor	V. Poor	V. Poor	V. Poor	No	V. Poor					
						486	70	Good	V. Poor	V. Poor	V. Poor	V. Poor	V. Poor	V. Poor	Poor	Poor	Fair	Poor	Poor	Good	Poor	Poor	V. Poor	Poor	No	V. Poor					
Ave. Soil Suitability Rating for Category								Good	V. Poor	V. Poor	V. Poor	V. Poor	V. Poor	V. Poor	Poor	Poor	Fair	Poor	Poor	Good	Poor	Poor	V. Poor	Poor	No	V. Poor	V. Poor	No	V. Poor	V. Poor	
323	Eliza Washl	154.25	US 395	11	Undev.	486	100	Good	V. Poor	V. Poor	V. Poor	V. Poor	V. Poor	V. Poor	Poor	Poor	Fair	Poor	Poor	Good	Good	Poor	Poor	V. Poor	Poor	No	V. Poor	V. Poor	No	V. Poor	

Table A-1
SOILS SUITABILITY MATRIX

ALLOTMENT DATA						PHYSICAL CHARACTERISTICS																												
						Predominant Soil Types	Soil Suitability Category																											
							Building Site Development						Construction Materials					Land Management			Recreational Development		Sanitary Facilities		Development with Wastewater Treatment System	Development with Septic Tank Drainfield	Development with Community Wastewater Lagoons	Overall Soil Suitability Rating for Allotment for Development						
Allotment No.	Allotment Name	Size (acres)	Location	No. of Owners	Current Land Use	Soil Number	Percentage of Allotment	Corrosion of Concrete	Lawns & Landscaping	Golf Fairways	Local Roads & Streets	Shallow Excavations	Dwellings and Small Commercial Buildings	Source of Gravel	Source of Roadfill	Source of Sand	Source of Reclamation Material	Source of Topsoil	Off Trail & Road Erosion Hazard	On Trail & Road Erosion Hazard	Suitability For Roads (Natural Surface)	Camp Areas & Picnic Areas	Paths, Trails, & Motorcycle Trails	Septic Tank Absorption Fields					Sewage Lagoons					
324	Geo Washin	160.00	US 395	8	homes	251	10	Good	V. Poor	V. Poor	V. Poor	V. Poor	V. Poor	Fair	Poor	Poor	Poor	Poor	Poor	Fair	No	Poor	V. Poor	V. Poor	No	V. Poor								
						486	90	Good	V. Poor	V. Poor	V. Poor	V. Poor	V. Poor	Poor	Poor	Fair	Poor	Poor	Poor	Good	Poor	Poor	V. Poor	Poor	No	V. Poor								
Ave. Soil Suitability Rating for Category								Good	V. Poor	V. Poor	V. Poor	V. Poor	V. Poor	Poor	Poor	Fair	Poor	Poor	Poor	Good	Poor	Poor	V. Poor	Poor	No	V. Poor	V. Poor	No	V. Poor	V. Poor				
325	Daisy Wash	160.00	US 395	6	Undev.	251	85	Good	V. Poor	V. Poor	V. Poor	V. Poor	V. Poor	Fair	Poor	Poor	Poor	Poor	Poor	Poor	V. Poor	V. Poor	V. Poor	V. Poor	No	V. Poor								
						486	15	Good	V. Poor	V. Poor	V. Poor	V. Poor	V. Poor	Poor	Poor	Fair	Poor	Poor	Poor	Good	Poor	Poor	V. Poor	Poor	No	V. Poor								
Ave. Soil Suitability Rating for Category								Good	V. Poor	V. Poor	V. Poor	V. Poor	V. Poor	Fair	Poor	Poor	Poor	Poor	Poor	Fair	V. Poor	V. Poor	V. Poor	V. Poor	No	V. Poor	V. Poor	No	V. Poor	V. Poor				
179	Sally Jim	160.00	US 395	79	Undev.	251	100	Good	V. Poor	V. Poor	V. Poor	V. Poor	V. Poor	Fair	Poor	Poor	Poor	Poor	Poor	Poor	V. Poor	V. Poor	V. Poor	V. Poor	No	V. Poor								
178	Jim Or Col	120.00	US 395	63	Undev.	251	100	Good	V. Poor	V. Poor	V. Poor	V. Poor	V. Poor	Fair	Poor	Poor	Poor	Poor	Poor	Poor	V. Poor	V. Poor	V. Poor	V. Poor	No	V. Poor	V. Poor	No	V. Poor	V. Poor				
455	Birdy Bath	120.00	US 395	10	Undev.	251	50	Good	V. Poor	V. Poor	V. Poor	V. Poor	V. Poor	Fair	Poor	Poor	Poor	Poor	Poor	Poor	V. Poor	V. Poor	V. Poor	V. Poor	No	V. Poor								
						486	50	Good	V. Poor	V. Poor	V. Poor	V. Poor	V. Poor	Poor	Poor	Fair	Poor	Poor	Poor	Good	Poor	Poor	V. Poor	Poor	No	V. Poor								
Ave. Soil Suitability Rating for Category								Good	V. Poor	V. Poor	V. Poor	V. Poor	V. Poor	Fair	Poor	Fair	Poor	Poor	Poor	Fair	Poor	Poor	V. Poor	Poor	No	V. Poor	V. Poor	No	V. Poor	V. Poor				
327	Nannie Bill	160.00	US 395	7	Undev.	251	100	Good	V. Poor	V. Poor	V. Poor	V. Poor	V. Poor	Fair	Poor	Poor	Poor	Poor	Poor	Poor	V. Poor	V. Poor	V. Poor	V. Poor	No	V. Poor	V. Poor	No	V. Poor	V. Poor				
196	Willie Smok	160.00	US 395	61	House	251	100	Good	V. Poor	V. Poor	V. Poor	V. Poor	No	Fair	Poor	Poor	Poor	Poor	Poor	Good	V. Poor	V. Poor	V. Poor	V. Poor	No	V. Poor	No	No	No	No	No	No		
692	Candu Tom	152.25	US 395	9	Undev.	486	100	Good	V. Poor	V. Poor	V. Poor	V. Poor	V. Poor	Poor	Poor	Poor	Fair	Poor	Poor	Good	Poor	Poor	V. Poor	Poor	No	V. Poor	V. Poor	No	V. Poor	V. Poor				
337	Jenny Moor	160.00	US 395	22	Undev.	251	90	Good	V. Poor	V. Poor	V. Poor	V. Poor	V. Poor	Fair	Poor	Poor	Poor	Poor	Poor	Poor	V. Poor	V. Poor	V. Poor	V. Poor	No	V. Poor								
						270	10	Good	V. Poor	V. Poor	V. Poor	V. Poor	V. Poor	Poor	Poor	Poor	Poor	Poor	Poor	Fair	V. Poor	V. Poor	V. Poor	V. Poor	No	No								
Ave. Soil Suitability Rating for Category								Good	V. Poor	V. Poor	V. Poor	V. Poor	V. Poor	Fair	Poor	Poor	Poor	Poor	Poor	Poor	V. Poor	V. Poor	V. Poor	V. Poor	No	V. Poor	V. Poor	No	V. Poor	V. Poor				
186	Senah Pitch	145.47	US 395	7	House	251	50	Good	V. Poor	V. Poor	V. Poor	V. Poor	V. Poor	Fair	Poor	Poor	Poor	Poor	Poor	Poor	V. Poor	V. Poor	V. Poor	V. Poor	No	V. Poor								
						255	34	Good	V. Poor	V. Poor	V. Poor	V. Poor	V. Poor	Poor	Poor	Poor	Poor	Poor	Poor	Poor	V. Poor	No	V. Poor	V. Poor	No	No								
						481	10	Good	No	No	No	No	V. Poor	Fair	Poor	Fair	Poor	Poor	Poor	Good	Good	Fair	Poor	Good	No	No								
Ave. Soil Suitability Rating for Category								Good	V. Poor	V. Poor	V. Poor	V. Poor	V. Poor	Fair	Poor	Poor	Poor	Poor	Poor	Poor	V. Poor	V. Poor	V. Poor	V. Poor	No	V. Poor	V. Poor	No	V. Poor	V. Poor				
185	Lucy Pitchw	160.00	US 395	18	Undev.	151	70	Good	V. Poor	V. Poor	V. Poor	V. Poor	No	Fair	Poor	Poor	Poor	Poor	Poor	Poor	V. Poor	V. Poor	V. Poor	V. Poor	No	No								
						255	30	Good	V. Poor	V. Poor	V. Poor	V. Poor	V. Poor	Poor	Poor	Poor	Poor	Poor	Poor	Poor	V. Poor	No	V. Poor	V. Poor	No	No								
Ave. Soil Suitability Rating for Category								Good	V. Poor	V. Poor	V. Poor	V. Poor	No	Fair	Poor	Poor	Poor	Poor	Poor	Poor	V. Poor	V. Poor	V. Poor	V. Poor	No	No	No	No	No	No	No	No	No	
184	Jim Pitchwo	160.00	US 395	15	Undev.	151	50	Good	V. Poor	V. Poor	V. Poor	V. Poor	No	Fair	Poor	Poor	Poor	Poor	Poor	Poor	V. Poor	V. Poor	V. Poor	V. Poor	No	No								
						255	50	Good	V. Poor	V. Poor	V. Poor	V. Poor	V. Poor	Poor	Poor	Poor	Poor	Poor	Poor	Poor	V. Poor	No	V. Poor	V. Poor	No	No								
Ave. Soil Suitability Rating for Category								Good	V. Poor	V. Poor	V. Poor	V. Poor	V. Poor	Fair	Poor	Poor	Poor	Poor	Poor	Poor	V. Poor	V. Poor	V. Poor	V. Poor	No	No	V. Poor	No	No	No	No	V. Poor		
336	Dah Hom Di	153.55	US 395	26	Undev.	151	70	Good	V. Poor	V. Poor	V. Poor	V. Poor	No	Fair	Poor	Poor	Poor	Poor	Poor	Poor	V. Poor	V. Poor	V. Poor	V. Poor	No	No								
						486	25	Good	V. Poor	V. Poor	V. Poor	V. Poor	V. Poor	Poor	Poor	Poor	Fair	Poor	Poor	Good	Poor	Poor	V. Poor	Poor	No	V. Poor								
Ave. Soil Suitability Rating for Category								Good	V. Poor	V. Poor	V. Poor	V. Poor	No	Fair	Poor	Poor	Poor	Poor	Poor	Fair	Poor	Poor	V. Poor	V. Poor	No	No	No	No	No	No	No	No	No	
183	Ozen Hack	160.00	US 395	16	Undev.	151	20	Good	V. Poor	V. Poor	V. Poor	V. Poor	No	Fair	Poor	Poor	Poor	Poor	Poor	Poor	Fair	No	Poor	V. Poor	V. Poor	No	No							
						251	20	Good	V. Poor	V. Poor	V. Poor	V. Poor	V. Poor	Fair	Poor	Poor	Poor	Poor	Poor	Poor	V. Poor	V. Poor	No	V. Poor	No	V. Poor								
						483	25	Good	V. Poor	V. Poor	No	V. Poor	V. Poor	Fair	Poor	Fair	Poor	Poor	Poor	Good	Fair	Fair	Poor	Poor	No	V. Poor								
						871	15	Good	V. Poor	V. Poor	Fair	No	V. Poor	Poor	Good	Poor	Fair	Poor	Good	Good	Fair	Good	V. Poor	Fair	V. Poor	V. Poor								
						884	15	Good	Fair	Fair	Fair	No	Fair	Poor	Good	Poor	Fair	Poor	Good	Good	Fair	Good	Fair	Fair	No	Poor								
Ave. Soil Suitability Rating for Category								Good	V. Poor	V. Poor	Poor	V. Poor	V. Poor	Fair	Fair	Poor	Poor	Poor	Poor	Fair	Poor	Fair	Poor	Poor	No	V. Poor	V. Poor	No	V. Poor	V. Poor				
182	Ida Hack	160.00	US 395	1	Undev.	151	95	Good	V. Poor	V. Poor	V. Poor	V. Poor	No	Fair	Poor	Poor	Poor	Poor	Poor	Poor	V. Poor	V. Poor	V. Poor	V. Poor	No	No	No	No	No	No	No	No		
181	McCue Har	160.00	US 395	7	Undev.	151	90	Good	V. Poor	V. Poor	V. Poor	V. Poor	No	Fair	Poor	Poor	Poor	Poor	Poor	Poor	V. Poor	V. Poor	V. Poor	V. Poor	No	No								
						255	10	Good	V. Poor	V. Poor	V. Poor	V. Poor	V. Poor	Poor	Poor	Poor	Poor	Poor	Poor	Poor	V. Poor	No	V. Poor	V. Poor	No	No								
Ave. Soil Suitability Rating for Category								Good	V. Poor	V. Poor	V. Poor	V. Poor	No	Fair	Poor	Poor	Poor	Poor	Poor	Poor	V. Poor	V. Poor	V. Poor	V. Poor	No	No	No	No	No	No	No	No	No	
180	Mammie Ha	120.00	US 395	36	Undev.	151	30	Good	V. Poor	V. Poor	V. Poor	V. Poor	No	Fair	Poor	Poor	Poor	Poor	Poor	Poor	V. Poor	V. Poor	V. Poor	V. Poor	No	No								
						255	70	Good	V. Poor	V. Poor	V. Poor	V. Poor	V. Poor	Poor	Poor	Poor	Poor	Poor	Poor	Poor	V. Poor	No	V. Poor	V. Poor	No	No								
Ave. Soil Suitability Rating for Category								Good	V. Poor	V. Poor	V. Poor	V. Poor	V. Poor	Poor	Poor	Poor	Poor	Poor	Poor	Poor	V. Poor	V. Poor	V. Poor	V. Poor	No	No	V. Poor	No	No	No	No	No	No	
229	Willie Dick	160.00	US 395	30	Undev.	251	95	Good	V. Poor	V. Poor	V. Poor	V. Poor	V. Poor	Fair	Poor	Poor	Poor	Poor	Poor	Poor	V. Poor	V. Poor	V. Poor	V. Poor	No	V. Poor	V. Poor	No	V. Poor	V. Poor				
228	Lizzie Dick	160.00	US 395	30	Undev.	251	90	Good	V. Poor	V. Poor	V. Poor	V. Poor	V. Poor	Fair	Poor	Poor	Poor	Poor	Poor	Poor	V. Poor	V. Poor	V. Poor	V. Poor	No	V. Poor								
						993	10	Good	Fair	Fair	V. Poor	Poor	V. Poor	Poor	Fair	Poor	Poor	Poor	Poor	Good	Good	V. Poor	V. Poor	Fair	V. Poor	V. Poor								
Ave. Soil Suitability Rating for Category								Good	Poor	Poor	V. Poor	V. Poor	V. Poor	Fair	Poor	Poor	Poor	Poor	Poor	Poor	V. Poor	V. Poor	V. Poor	V. Poor	V. Poor	No	V. Poor	V. Poor	No	V. Poor	V. Poor			
227	Washoe (Ur	160.00	US 395	134	Undev.	251	100	Good	V. Poor	V. Poor	V. Poor	V. Poor	V. Poor	Fair	Poor	Poor	Poor	Poor	Poor	Poor	V. Poor	V. Poor	V. Poor	V. Poor	No	V. Poor	V. Poor	No	V. Poor	V. Poor				
226	Sally John	160.00	US 395	80	Undev.	251	50	Good	V. Poor	V. Poor	V. Poor	V. Poor	V. Poor	Fair	Poor	Poor	Poor	Poor	Poor	Poor	V. Poor	V. Poor	V. Poor	V. Poor	No	V. Poor								
						483	10	Good	V. Poor	V. Poor	No	V. Poor	V. Poor	Fair	Poor	Fair	Poor	Poor	Poor	Good	Fair	Fair	Poor	Poor	No	V. Poor								
						884	40	Good	Fair	Fair	Fair	No	Fair	Poor	Good	Poor	Fair	Poor	Poor	Good	Fair	Good	Fair	Fair	No	Poor								
Ave. Soil Suitability Rating for Category								Good	Poor	Poor	Poor	V. Poor	V. Poor	Poor	Fair	Fair	Poor	Poor	Poor	Poor	Fair	Poor	Poor	Poor	No	V. Poor	Poor	V. Poor	V. Poor	V. Poor	V. Poor			
175	Wa-Pe-Cu-	160.00	US 395	31	Undev.	151	60	Good	No	No	V. Poor	V. Poor	No	Fair	Poor	Poor	Poor	Poor	Poor	Poor	V. Poor	V. Poor	V. Poor	V. Poor	No	No								
						884	40	Good	Fair	Fair	Fair	No	Fair	Poor	Good	Poor	Fair	Poor	Poor	Good	Fair	Good	Fair	Fair	No	Poor								
Ave. Soil Suitability Rating for Category								Good	Poor	Poor	Poor	V. Poor	V. Poor	Poor	Fair	Fair	Poor	Poor	Poor	Poor	Fair	Fair	Fair	Fair	Poor	No	V. Poor	Poor	V. Poor	V. Poor	V. Poor			
176	Louisa Fillm	120.00	US 395	29	Undev.	151	100	Good	V. Poor	V. Poor	V. Poor	V. Poor	No	Fair	Poor	Poor	Poor	Poor	Poor	Poor	V. Poor	V. Poor	V. Poor	V. Poor	No	No	No	No	No	No	No	No		
177	Totsie Fillm	160.00	US 395	31	Undev.	151	100	Good	V. Poor	V. Poor	V. Poor	V. Poor	No	Fair	Poor	Poor	Poor	Poor	Poor	Poor	V. Poor	V. Poor	V. Poor	V. Poor	No	No	No	No	No	No	No	No		

Table A-1
SOILS SUITABILITY MATRIX

ALLOTMENT DATA						PHYSICAL CHARACTERISTICS																													
						Predominant Soil Types		Soil Suitability Category																											
Building Site Development										Construction Materials						Land Management			Recreational Development		Sanitary Facilities		Development with Wastewater Treatment System	Development with Septic Tank Drainfield	Development with Community Wastewater Lagoons	Overall Soil Suitability Rating for Allotment for Development									
Corrosion of Concrete	Lawns & Landscaping	Golf Fairways	Local Roads & Streets	Shallow Excavations	Dwellings and Small Commercial Buildings	Source of Gravel	Source of Roadfill	Source of Sand	Source of Reclamation Material	Source of Topsoil	Off Trail & Road Erosion Hazard	On Trail & Road Erosion Hazard	Suitability For Roads (Natural Surface)	Camp Areas & Picnic Areas	Paths, Trails, & Motorcycle Trails	Septic Tank Absorption Fields	Sewage Lagoons																		
213	Henry Or Sd	160.00	US 395	18	Undev.	151	30	Good	V. Poor	V. Poor	V. Poor	V. Poor	No	Fair	Poor	Poor	Poor	Poor	Poor	Poor	V. Poor	V. Poor	V. Poor	V. Poor	No	No									
Ave. Soil Suitability Rating for Category						Good	V. Poor	V. Poor	V. Poor	V. Poor	V. Poor	Poor	Poor	Poor	Poor	Poor	Poor	V. Poor	V. Poor	V. Poor	No	No	No	No	No	No	No	No	No	No					
253	(LasSee) W	160.00	US 395	31	Undev.	153	15	Good	V. Poor	V. Poor	V. Poor	V. Poor	No	Fair	Poor	Poor	Poor	Poor	Poor	Fair	V. Poor	V. Poor	V. Poor	V. Poor	No	No									
						251	40	Good	No	No	V. Poor	V. Poor	V. Poor	Fair	Poor	Poor	Poor	Poor	Poor	V. Poor	V. Poor	V. Poor	No	No	No	No	No	No	No	No					
						993	45	Good	Fair	Fair	V. Poor	Fair	V. Poor	Poor	Poor	Poor	Poor	Good	Good	V. Poor	V. Poor	Fair	V. Poor	V. Poor											
Ave. Soil Suitability Rating for Category						Good	Poor	Poor	V. Poor	Poor	V. Poor	Fair	Poor	Poor	Poor	Poor	Fair	Poor	V. Poor	V. Poor	Poor	No	No	V. Poor	No	No	No	No	No						
225	Jim John	120.00	US 395	126	House	251	20	Good	V. Poor	V. Poor	V. Poor	V. Poor	No	Fair	Poor	Poor	Poor	Poor	Poor	Poor	V. Poor	V. Poor	V. Poor	V. Poor	No	V. Poor									
						884	75	Good	Fair	Fair	Fair	No	Fair	Poor	Good	Fair	Poor	Good	Fair	Good	Fair	Fair	No	Poor											
Ave. Soil Suitability Rating for Category						Good	Poor	Poor	Poor	No	Poor	Poor	Fair	Poor	Fair	Poor	Fair	Poor	Fair	Poor	Fair	Poor	Poor	No	Poor	Poor	Poor	Poor	Poor	Poor					
200	Charley (or	160.00	US 395	28	Undev.	151	100	Good	V. Poor	V. Poor	V. Poor	V. Poor	No	Fair	Poor	Poor	Poor	Poor	Poor	Poor	V. Poor	V. Poor	V. Poor	V. Poor	No	No									
201	Bess Buel	160.00	US 395	5	Undev.	151	90	Good	V. Poor	V. Poor	V. Poor	V. Poor	No	Fair	Poor	Poor	Poor	Poor	Poor	Poor	V. Poor	V. Poor	V. Poor	V. Poor	No	No									
						252	10	Good	V. Poor	V. Poor	V. Poor	V. Poor	V. Poor	Fair	Poor	Poor	Poor	Poor	Poor	V. Poor	V. Poor	No	No	No	No	No	No	No	No						
						Ave. Soil Suitability Rating for Category																		Good	V. Poor	V. Poor	V. Poor	V. Poor	No	Fair	Poor	Poor	Poor	Poor	V. Poor
214	Annie Henry	160.00	US 395	34	Undev.	151	15	Good	V. Poor	V. Poor	V. Poor	V. Poor	No	Fair	Poor	Poor	Poor	Poor	Poor	V. Poor	V. Poor	V. Poor	V. Poor	No	No										
						152	10	Good	V. Poor	V. Poor	V. Poor	V. Poor	V. Poor	Fair	Poor	Poor	Poor	Poor	Poor	V. Poor	V. Poor	V. Poor	V. Poor	V. Poor	V. Poor	V. Poor	V. Poor	V. Poor	V. Poor						
						255	70	Good	V. Poor	V. Poor	V. Poor	V. Poor	V. Poor	Poor	Poor	Poor	Poor	Poor	Poor	V. Poor	No	V. Poor	V. Poor	No	No										
Ave. Soil Suitability Rating for Category						Good	V. Poor	V. Poor	V. Poor	V. Poor	V. Poor	Poor	Poor	Poor	Poor	Poor	Poor	V. Poor	V. Poor	V. Poor	V. Poor	No	No	V. Poor	No	No	No	No							
206	Jim Walker	160.00	US 395	31	Undev.	251	80	Good	V. Poor	V. Poor	V. Poor	V. Poor	V. Poor	Fair	Poor	Poor	Poor	Poor	Poor	Poor	V. Poor	V. Poor	V. Poor	V. Poor	No	V. Poor									
						993	20	Good	Fair	Fair	V. Poor	Fair	V. Poor	Poor	Fair	Poor	Poor	Poor	Good	Good	V. Poor	V. Poor	Fair	V. Poor	V. Poor										
						Ave. Soil Suitability Rating for Category																		Good	Poor	Poor	V. Poor	Poor	V. Poor	Fair	Poor	Poor	Poor	Fair	Poor
296	Billy (Dah G	160.00	US 395	18	Undev.	251	85	Good	V. Poor	V. Poor	V. Poor	V. Poor	V. Poor	Fair	Poor	Poor	Poor	Poor	Poor	Poor	V. Poor	V. Poor	V. Poor	V. Poor	No	V. Poor									
						993	15	Good	Fair	Fair	V. Poor	Fair	V. Poor	Poor	Fair	Poor	Poor	Poor	Poor	Good	Good	V. Poor	V. Poor	Fair	No	No									
Ave. Soil Suitability Rating for Category						Good	Poor	Poor	V. Poor	Poor	No	Fair	Poor	Poor	Poor	Poor	Poor	Fair	Poor	V. Poor	V. Poor	Poor	No	V. Poor	No	No	No	No	No						
297	Lady Johns	120.00	US 395	54	Undev.	251	40	Good	V. Poor	V. Poor	V. Poor	V. Poor	V. Poor	Fair	Poor	Poor	Poor	Poor	Poor	Poor	V. Poor	V. Poor	V. Poor	V. Poor	No	V. Poor									
						993	55	Good	Fair	Fair	V. Poor	Fair	V. Poor	Poor	Fair	Poor	Poor	Poor	Good	Good	V. Poor	V. Poor	Fair	V. Poor	V. Poor										
						Ave. Soil Suitability Rating for Category																		Poor	Poor	V. Poor	Poor	V. Poor	Poor	Fair	Fair	V. Poor	V. Poor	Poor	V. Poor
205	Sussie Ming	160.00	US 395	9	Undev.	252	15	Good	V. Poor	V. Poor	V. Poor	V. Poor	V. Poor	Fair	Poor	Poor	Poor	Poor	Poor	Poor	V. Poor	V. Poor	V. Poor	V. Poor	No	No									
						884	25	Good	Fair	Fair	Fair	No	Fair	Poor	Good	Poor	Fair	Poor	Good	Fair	Good	Fair	Fair	No	Poor										
						871	45	Good	V. Poor	V. Poor	Fair	No	V. Poor	Poor	Good	Poor	Fair	Poor	Good	Fair	Good	V. Poor	Fair	V. Poor	V. Poor										
						993	15	Good	Fair	Fair	V. Poor	Fair	V. Poor	Poor	Fair	Poor	Poor	Poor	Good	Good	V. Poor	V. Poor	Fair	V. Poor	V. Poor										
Ave. Soil Suitability Rating for Category						Good	Poor	Poor	Poor	V. Poor	Poor	Poor	Poor	Fair	Poor	Fair	Poor	Good	Good	Good	Poor	Poor	V. Poor	V. Poor	Poor	Poor	V. Poor	V. Poor	Poor	Poor					
202	Capt Jim or	160.00	US 395	83	Undev.	151	50	Good	V. Poor	V. Poor	No	No	No	Fair	Poor	Poor	Poor	Poor	Poor	Poor	V. Poor	V. Poor	V. Poor	V. Poor	No	No									
						871	50	Good	V. Poor	V. Poor	Fair	No	V. Poor	Poor	Good	Poor	Fair	Poor	Good	Fair	Good	V. Poor	Fair	V. Poor	V. Poor										
						Ave. Soil Suitability Rating for Category																		Good	V. Poor	V. Poor	Poor	No	V. Poor	Fair	Fair	Poor	Fair	Poor	V. Poor
203	Sussie (No.)	160.00	US 395	108	Undev.	252	60	Good	V. Poor	V. Poor	V. Poor	V. Poor	V. Poor	Fair	Poor	Poor	Poor	Poor	Poor	Poor	V. Poor	V. Poor	V. Poor	No	No										
						871	25	Good	V. Poor	V. Poor	Fair	No	V. Poor	Poor	Good	Poor	Fair	Poor	Good	Fair	Good	V. Poor	Fair	V. Poor	V. Poor										
						151	15	Good	V. Poor	V. Poor	No	No	No	Fair	Poor	Poor	Poor	Poor	Poor	Poor	V. Poor	V. Poor	V. Poor	No	No										
Ave. Soil Suitability Rating for Category						Good	V. Poor	V. Poor	Poor	No	V. Poor	Fair	Fair	Poor	Poor	Poor	Poor	Fair	Poor	Poor	Fair	Poor	No	No	V. Poor	No	No	V. Poor	No	No					
241	Aggie Dick	160.00	US 395	95	Undev.	280	95	Good	No	No	V. Poor	V. Poor	V. Poor	Poor	Poor	Poor	Poor	Poor	Poor	Fair	Fair	Poor	V. Poor	No	No	V. Poor	V. Poor	No	No						
207	Dow-Dom-A	160.00	US 395	90	Undev.	251	85	Good	V. Poor	V. Poor	V. Poor	V. Poor	V. Poor	Fair	Poor	Poor	Poor	Poor	Poor	Poor	V. Poor	V. Poor	V. Poor	V. Poor	No	V. Poor									
						884	15	Good	Fair	Fair	Fair	No	Fair	Poor	Good	Poor	Fair	Poor	Good	Fair	Good	Fair	Fair	No	Poor										
						Ave. Soil Suitability Rating for Category																		Good	Poor	Poor	Poor	V. Poor	Poor	Fair	Fair	Poor	Poor	Poor	Poor
204	Ta Ga Ga N	160.00	US 395	9	Undev.	252	15	Good	V. Poor	V. Poor	V. Poor	V. Poor	V. Poor	Fair	Poor	Poor	Poor	Poor	Poor	Poor	Poor	V. Poor	V. Poor	V. Poor	No	No									
						871	60	Good	V. Poor	V. Poor	Fair	No	V. Poor	Poor	Good	Poor	Fair	Poor	Good	Fair	Good	V. Poor	Fair	V. Poor	V. Poor										
						993	15	Good	Fair	Fair	V. Poor	Fair	V. Poor	Poor	Fair	Poor	Poor	Poor	Good	Good	V. Poor	V. Poor	Fair	V. Poor	V. Poor										
Ave. Soil Suitability Rating for Category						Good	Poor	Poor	Poor	V. Poor	V. Poor	Poor	Poor	Fair	Poor	Fair	Poor	Fair	Fair	Fair	V. Poor	Poor	V. Poor	V. Poor	V. Poor	V. Poor	V. Poor	V. Poor							
257	Charley Shd	160.00	US 395	25	Undev.	252	90	Good	V. Poor	V. Poor	V. Poor	V. Poor	V. Poor	Fair	Poor	Poor	Poor	Poor	Poor	Poor	Poor	V. Poor	V. Poor	V. Poor	No	No									
						871	10	Good	V. Poor	V. Poor	Fair	No	V. Poor	Poor	Good	Poor	Fair	Poor	Good	Fair	Good	V. Poor	Fair	V. Poor	V. Poor										
Ave. Soil Suitability Rating for Category						Good	V. Poor	V. Poor	Poor	V. Poor	V. Poor	Fair	Poor	Poor	Poor	Poor	Poor	Poor	Poor	Poor	V. Poor	V. Poor	V. Poor	No	No	V. Poor	No	No	No						
Partitioned Allotment																																			
10 Allotments North																																			
16 Allotments NE																																			
54 Allotments US 395																																			
80 Total Developable Allotments																																			

APPENDIX B

Allotment Ownership

Appendix B

Allotment Ownership

Allotment Owners Summary

The number of owners of individual allotments is a variable that affects the attractiveness of an allotment to a land developer. The fewer owners, the more chance that consensus can be reached and in a shorter time frame. The more owners, the less chance that even a majority can be reached, and if one can be reached it may take considerable effort and time, all of which increases the cost to a developer. This problem was pointed out during the first set of public meetings where a number of allotment owners remarked that with multiple ownerships, reaching agreement on anything was very difficult and impossible in many cases. It should be noted that the only existing development (Pine View Estates) occurred on an allotment with only one owner. Ownership numbers are displayed in Table 2 (Land Use Assessment Matrix) in the main body of this Land Use Suitability Analysis Working Paper..

Based on ownership data provided by BIA Realty, an analysis produced the following findings:

- Only 24 (14%) of the allotments have 5 or less owners (one is already developed)
- Only 62 (35%) of the allotments have 15 or less owners
- The remaining 114 allotments (65%) have more than 15 owners
- Fifteen allotments have 100 or more owners with 160 being the highest ownership number
- Nine allotments have been partitioned into smaller units

Table B-1 Pine Nut Allotments Ownership Summary					
Area	Number of Owners				
	0-5	6-15	16-30	31-50	More than 50
Northern Allotments	0	6	4	0	0
Northeast Allotments	5	3	6	2	0
Hwy 395 Allotments	19	29	25	31	46
Total All Areas	24	38	35	33	46
% of Total	14%	22%	20%	19%	26%

Those allotments with five or fewer owners will be the most attractive to developers. Those with 15 owners or less will be only marginally attractive, and those allotments with more 15 will likely not be attractive at all. The multiple ownership issue can be mitigated to a great degree if the allotment owners were to agree to establish a legal entity, such as a development corporation, with a small board of directors that is empowered to make binding decisions. Setting up such an entity, however, also requires agreement by a majority of owners.

The development suitability analysis showed that 80 of the total 176 allotments had development potential. When looking at just those 80 allotments, the ownership findings are as follows:

- Only 11 (14%) of the allotments have 5 or less owners (one is already developed)
- Only 33 (41%) of the allotments have 15 or less owners
- The remaining 47 allotments (59%) have more than 15 owners
- Eight have been partitioned into smaller parcels

As a result, less than half of these 80 allotments (see Figure B-1) would be of interest to a developer unless the multiple ownership issue can be mitigated.

Table B-2 Ownership Summary for Developable Allotments					
Area	Number of Owners				
	0-5	6-15	16-30	31-50	More than 50
Northern Allotments	0	6	4	0	0
Northeast Allotments	5	3	6	2	0
Hwy 395 Allotments	6	13	13	9	13
Total All Areas	11	22	23	11	13
% of Total	14%	28%	29%	14%	16%

Of the 8 partitioned allotments, all of the partitions have less than 5 owners and most have either 1 or 2 owners. This will be a more attractive situation to developers, although in some cases the number of partitions greatly reduces the size of the parcel.

Table B-3 Partitioned Allotments			
Allotment No.	Size in Acres	No. of Partitioned Units	Total Owners All Units
183	160.00	16	16
186	145.47	3	7
234	98.10	2	2
469	160.00	11	11
729	162.50	10	26
730	160.00	11	14
731	160.00	12	24
732	160.00	2	4

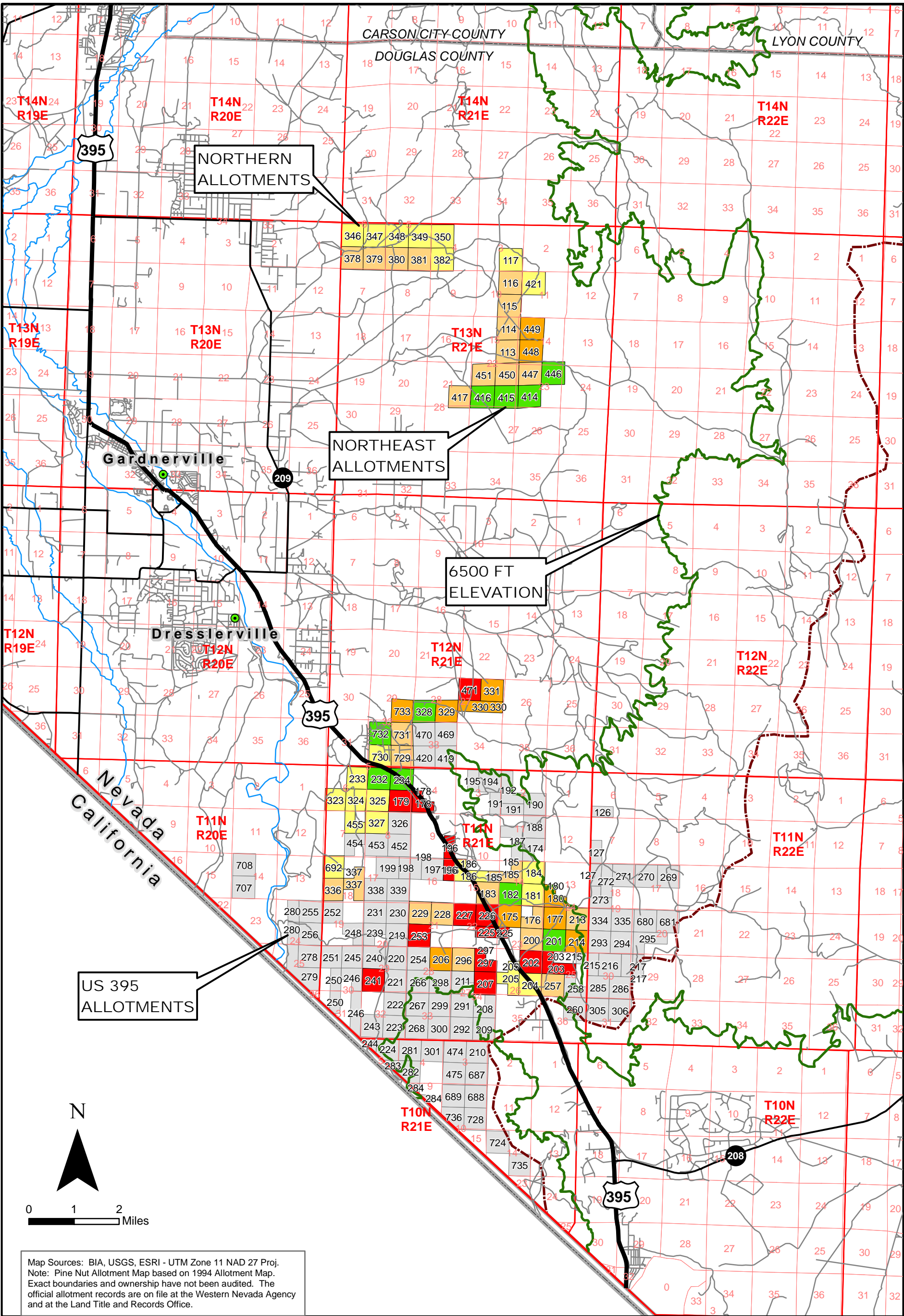


Figure B-1
**Numbers of Owners
Per Developable Allotments**
Pine Nut Allotments, Douglas County, Nevada

Map Prepared by Cascade Design Professionals, Inc., Jan. 2009

Legend

Number of Owners	Not Considered Developable
0 - 5	Carson River Watershed Boundary
6 - 15	6500 Ft. El.
16 - 30	Local Road
31 - 50	50 Meter Contours
> 50	

APPENDIX D
DEVELOPMENT TREND ANALYSIS
AND
USE DESIGNATIONS

PINE NUT ALLOTMENTS
REVISED USE DESIGNATIONS STATUS REPORT, MAY 1, 2009

This report summarizes the findings related to the land use designations of the Pine Nut allotments as of May 1, 2009. These findings were presented verbally at a meeting with BIA staff at the Western Regional Office in Phoenix on May 13, 2009. Some additional materials have been added to this report but the findings are essentially the same as reported at that meeting.

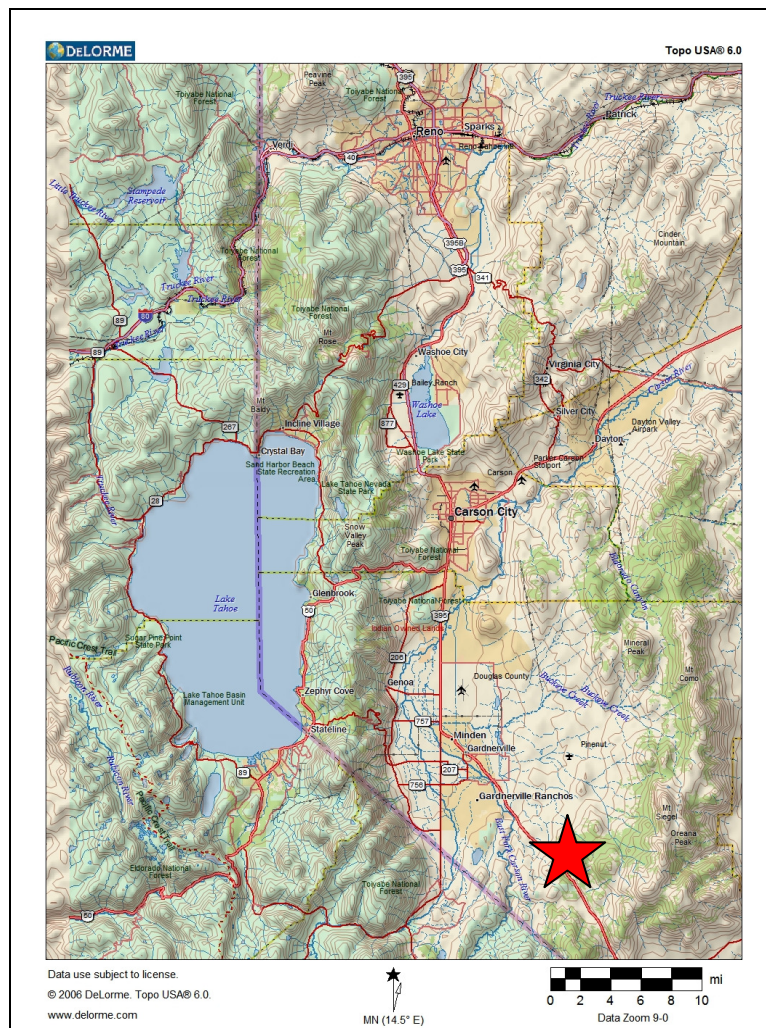
The report is organized as follows:

1. Growth and Development in the Pine Nut Region
 - Overall growth trends and projections
 - Patterns of growth and development
 - Types of growth and development
 - Growth and development in relation to the allotment areas
 - Influences on the allotment areas
2. Development Suitability by Areas
 - “Northern Allotments” area
 - Gardnerville Ranchettes, Pine View Estates area
 - Holbrook Junction area
 - Central Hwy 395 area
 - East/west of Hwy 395 areas
3. Summary of Land Use Designations by Area

The findings and recommended designations are based on extensive on-site research performed during the period of July – October, 2007 along with additional research and analysis of data performed from October 2007 to May 2009.

Part 1: Growth and Development in the Pine Nut Region

The Pine Nut allotments are all located in Douglas County, Nevada, with Minden/Gardnerville as its main urban center about 60 miles south of Reno. However, growth in Douglas County is influenced by patterns and trends in a larger region that includes Carson City (which is its own jurisdiction with separate data) and Washoe County where Reno is the engine for much of the regional growth. Storey County also has some influence on growth patterns in the region, but most of that is oriented toward the Finley and Fallon areas rather than south toward Douglas County so its data are not included in this report.



Map of Region. ★ shows general area of allotments

The area from Carson City south to the Pine Nut Mountains is known as the Carson Valley, with the Carson River running through it on a south-to-north course. The Valley extends from the Pine Nut Mountains on the east to the foothills of the Sierra Nevada Mountains on the west. US Hwy 395 is the main highway connecting the Carson Valley to points north and south.

One of the issues in developing good data for Douglas County is that its western boundary extends to the eastern shoreline of Lake Tahoe and includes the large casino complexes at South Lake Tahoe as well as the expensive homes that have been constructed on the shoreline and hills overlooking the lake. That causes certain economic and demographic trend lines to shift upward from those found in the Carson Valley. Even the Valley is not immune from skewed data, however, as recent golf course housing developments in the Genoa area have also shifted income and pricing averages upward. As much as possible, this report takes those factors into account and modifies the data to reflect the allotment areas and the types of development most suited for them.

Population Changes

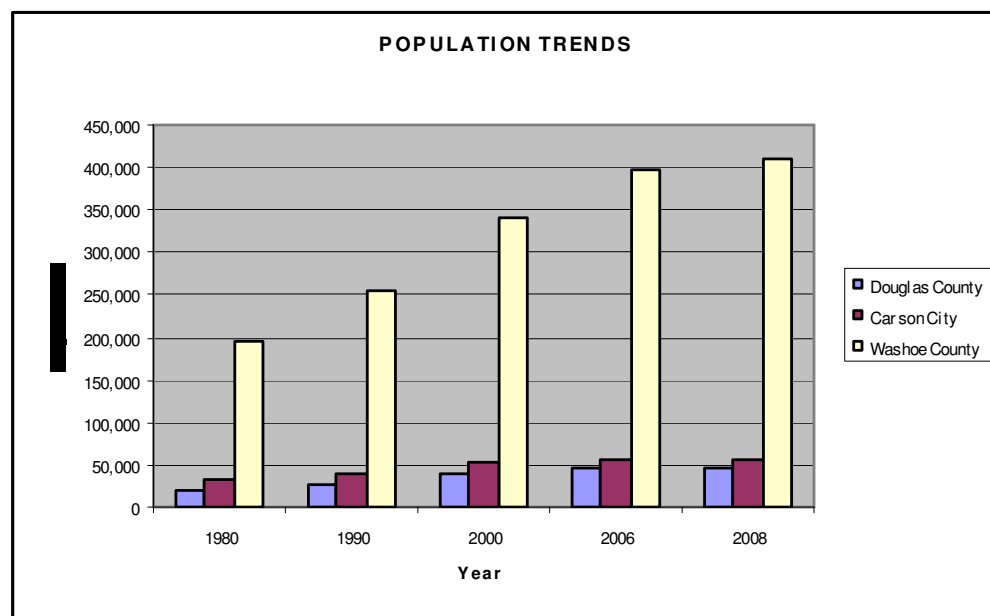
Table 1 shows population growth in the three parts of Western Nevada that comprise the region evaluated in this report, followed by a graphic depiction of the data in Chart 1.

Table 1: Population Growth in Western Nevada, 1980 - 2006

	1980	1990	2000	2006	2008	%Δ 1980-2008
Douglas County	19,921	27,637	41,259	45,909	45,180	126.8%
Carson City	32,022	40,443	52,457	55,289	54,867	71.3%
Washoe County	193,623	254,667	339,486	396,428	410,443	112.0%
Total	311,043	324,737	435,202	499,632	512,498	64.8%

Source: US Census Bureau, Decennial Census Counts and Estimated Counts as of July 1, 2006 and 2008

Chart 1: Population Trends in Western Nevada, 1980 - 2008



The data show that Douglas County experienced the highest growth rates of the three counties measured, with an increase of 126.8% from April 1, 1980 to July 1, 2008. Carson City grew by a little over one-half that rate, at 71.3%, while Washoe County increased by 112.0%.

In numerical terms, Douglas County grew by 25,259 people while Carson City grew by 22,845 people, nearly the same amount as Douglas County. However, Washoe County added 216,820 people which was 9½ times the numerical growth in Douglas County. Both Douglas County and Carson City showed slight declines in population between 2006 and 2008 as the U.S. entered into recession, but Washoe County showed continued growth. Douglas County's population declined by 1.6% over the two-year period while the decline in Carson City was 0.8%. Washoe County's population *increased* by 3.5%.

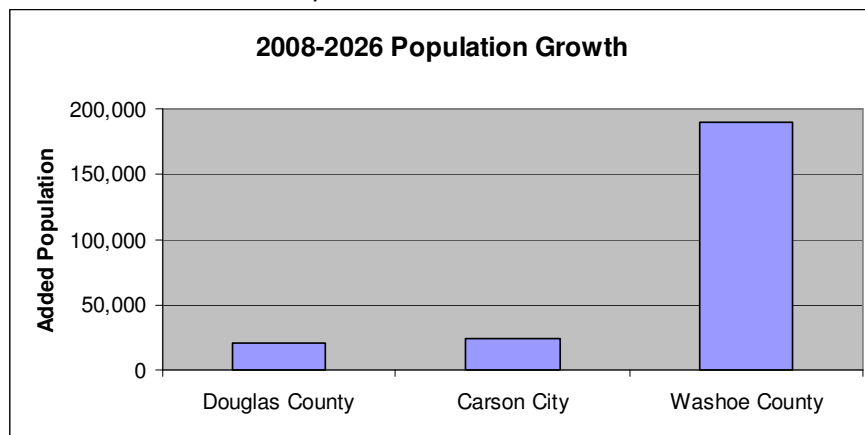
According to data released in 2007 by the Center for Regional Studies at the University of Nevada Reno, these trends are going to change in the future. Their report estimates that these three areas will grow by the following numbers between 2008 and 2026:

Table 2: Population Growth Forecasts, 2008 - 2026

	2008 Population	2026 Pop Est.	# Change	% Change
Douglas County	45,180	66,064	20,884	46.2%
Carson City	54,867	79,134	24,267	44.2%
Washoe County	410,443	586,248	175,805	42.8%
Total	512,498	731,446	218,948	42.7%

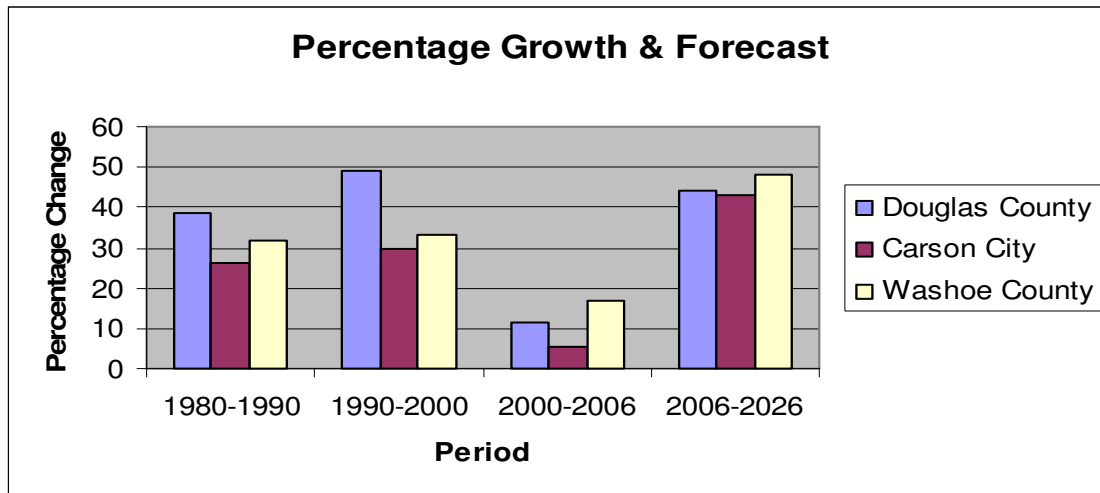
Data adjusted by Elesco Limited to show base of 2008 instead of 2005.

Chart 2: Population Forecasts, 2008 - 2026



These forecasts indicate that Douglas County will continue to lead in percentage population growth over the period from 2008 to 2026, while Washoe County will continue to dominate the region's growth in absolute numbers. They also show Carson City's percentage growth almost catching up with that of Douglas County while surpassing it in absolute numbers. It is not known how the declines in population in Douglas County and Carson City between 2006 and 2008 will affect these long range forecasts.

Chart 3: Population Growth & Forecasts in Percentages, 1980 - 2026

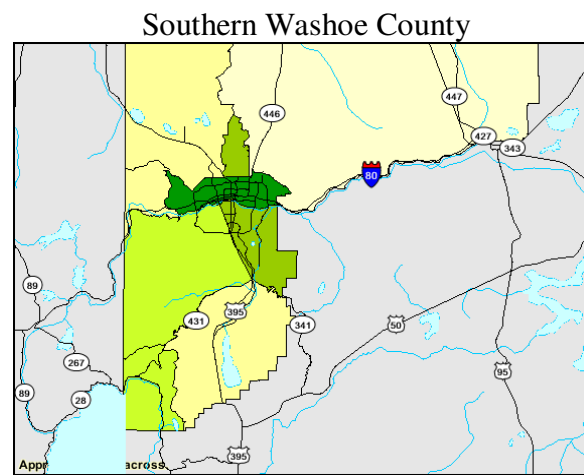
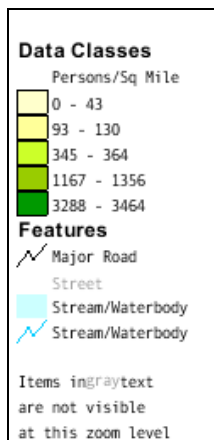


While the numerical growth in Douglas County is forecasted to be relatively smaller than the other two areas measured, the net addition of more than 20,000 people between 2008 and 2026 indicates continuation of new demand for housing along with other commodities and services.

Patterns of Growth and Development

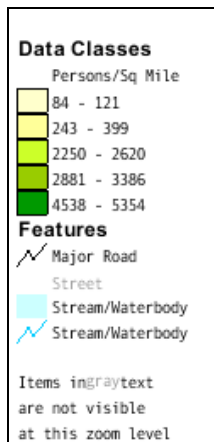
The patterns of population densities at the time of the 2000 U.S. Census are shown below for Washoe County, Carson City, and Douglas County. All three maps have the same scale of 65 miles across.

Legend

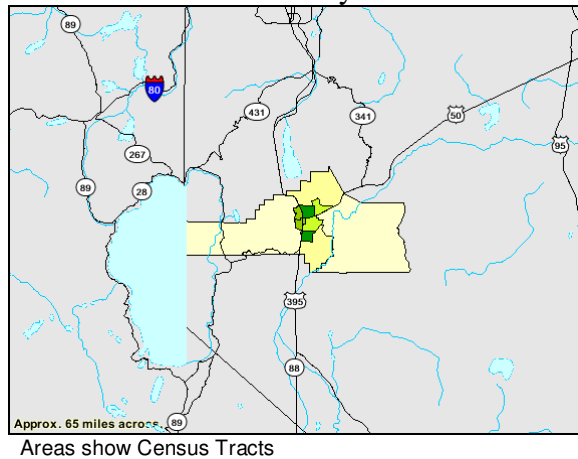


Areas show regional subdivisions

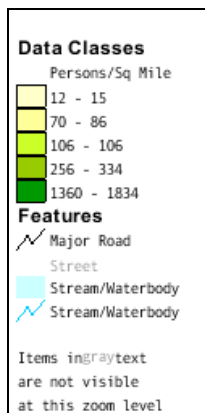
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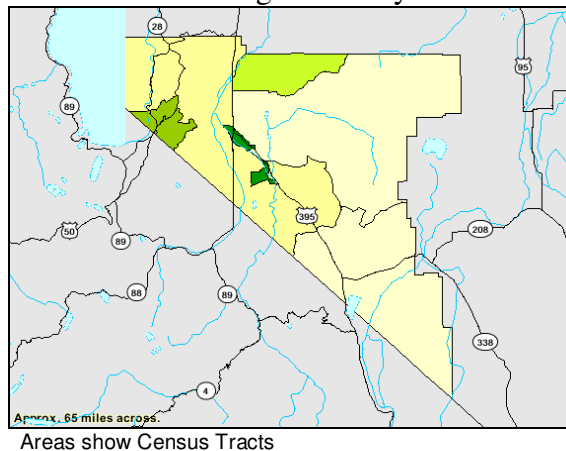
Carson City



Legend



Douglas County



These U.S. Census Bureau maps show that in the year 2000 population in all three areas tended to be concentrated along the US Hwy 395 corridor, primarily in the incorporated cities. The next heaviest concentrations tended to be west of US Hwy 395 toward the Sierra Nevada Mountains and Lake Tahoe. Only Carson City showed less of this trend.

Comparable data for measuring changes during the current decade will not be available until the results of the 2010 Census are released, probably in 2012. During the interim period, the Bureau of Business and Economic Research at the University of Nevada, Reno, provides estimates of changes in population by cities and counties, but not by Census Tracts or County Subdivisions. Their graphic showing new subdivision activities in the region was examined for this report, which showed that most recent development activities followed the same general patterns as the Census population concentration maps. No evidence was found that there are any dramatic shifts taking place that would direct growth towards southern Douglas County and the allotment areas.

The Center for Regional Studies at the University of Nevada, Reno, provides information about residential building permit activities in Northwest Nevada, which includes the three areas examined in this report plus Churchill, Lyon, Mineral and Storey counties. Their report states that the source of data is the US Census Bureau.

Their report showing building permit data from the 1st Quarter of 2006 through the 1st Quarter of 2009 is shown below for Carson City, Douglas and Washoe counties.

Table 3: Quarterly Residential Building Permits – Carson City, Douglas County, Washoe County

	1st Quarter 2006	2nd Quarter 2006	3rd Quarter 2006	4th Quarter 2006	1st Quarter 2007	2nd Quarter 2007	3rd Quarter 2007
Carson City	22	17	33	115	15	22	7
Douglas County	148	193	48	201	70	53	35
Washoe County	1045	580	1036	381	461	661	467

	4th Quarter 2007	1st Quarter 2008	2nd Quarter 2008	3rd Quarter 2008	4th Quarter 2008	1st Quarter 2009	Total
Carson City	7	7	2	3	4	11	265
Douglas County	30	15	28	26	7	10	861
Washoe County	350	214	243	407	150	156	6151

Source: US Census Bureau

Of the total of 7,277 residential building permits issued during this three-year period, the 6,151 permits issued in Washoe County represented 84.5% of the total; the 861 permits in Douglas County represented 11.8% of the total and Carson City's 265 permits represented 3.6%. While building permits do not necessarily track evenly with population growth, it can be assumed that there is some degree of correlation. On the basis of building permits, Douglas County may be experiencing higher rates of population growth than are indicated solely by the population estimates and projections.

Building permit activities in all three areas have experienced sharp declines beginning in about the first quarter of 2007, especially in Douglas County and Carson City. The total number of building permits issued in the three counties between the 1st quarter of 2006 and the 1st quarter of 2009 was slightly less than one-half the total during the three year period that ended in the 4th quarter of 2006. However, building permits and housing starts are expected to pick up again in the 1st quarter of 2010 as the national recession moderates. The region may experience strong pent-up demand for housing after this long period of reduced construction

Types of Growth and Development

An indication of the types of growth and development in Douglas County can be shown by the recent changes and current assessed values by major classifications. Table 4 shows those values from The State of the County presentation to the Board of Commissioners on July 5, 2007.

Table 4: Assessed Values by Major Category, Douglas County, Nevada

	2005-06	2006-07 *	2007-08 **	% of Total
Vacant Land	150,681,433	208,128,409	267,955,945	7.87%
Residential	1,851,301,355	2,435,319,267	2,631,869,638	77.30%
Tourist Commercial (42,43,44)	178,708,403	161,326,704	163,525,583	4.80%
Com./Industrial	157,617,142	196,751,164	209,198,474	6.14%
Agricultural	23,945,181	27,843,532	30,819,398	0.91%
Other	105,192,752	103,627,607	101,547,340	2.98%
Total	2,467,446,266	3,132,996,683	3,404,916,378	100.00%
% Increase Over Previous Year	21.04%	26.97%	8.68%	
* at 7/1/06				
** at 1/30/07				

Several significant findings can be drawn from these statistics. One is the apparent slowing of annual rates of growth, although the figures for 2007-08 represented only one-half of the fiscal year. However, other data confirm that overall growth has slowed in Douglas County especially in the residential construction sector.

Another significant finding is that the value of vacant land, which was 6.1% of the total valuation in the 2005-06 period, grew to 7.87% in the 2007-08 period. Assuming the quantity of land is a constant, that means the value of vacant land increased by 78% over a period of 2 ½ years. The normal economic reaction to higher prices is lower demand.

The concentration of values in the residential sector is also significant, especially when viewed against the other sectors shown in the table. The Tourist Commercial sector showed a decline in assessed values of 8.5% from 2005-06 to 2007-08 while the Commercial/Industrial sector showed an increase of 32.7%. Combined, they represented approximately 11% of total assessed values in 2007-08. While current values have not been obtained, it can be assumed that land values in all categories have declined in direct correlation to the decline in construction activity.

A review of the commercial/industrial sector shows the following companies are the largest employers in Douglas County. This list excludes school districts and health care providers that are also large employers.

Table 5: Douglas County's Largest Commercial/Industrial Employers

Employer	City	Industry	Code	Number of Employees
Harrah's Stateline	Stateline	Casino Hotels	721120	1,500 - 1,999
Harvey's Resort Hotel Casino	Stateline	Casino Hotels	721120	1,000 - 1,499
Horizon Casino Resort	Stateline	Casino Hotels	721120	800 - 899
Bently Nevada	Minden	Industrial Process Variable Instruments	334513	600 - 699
Douglas County	Minden	Executive & Legislative Offices Combined	921140	600 - 699
Carson Valley Inn	Minden	Casino Hotels	721120	500 - 599
Lakeside Inn & Casino	Stateline	Casino Hotels	721120	300 - 399
Travel Systems Limited	Zephyr Cove	Food Service Contractors	722310	200 - 299
Resorts West A Nevada Partner	Stateline	Hotels (except Casino Hotels) and Motels	721110	200 - 299

Source: Nevada Department of Employment, Training and Rehabilitation (DETR)

This list clearly shows that the gaming industry dominates commercial/industrial employment in Douglas County and that most of this sector is located at Lake Tahoe rather than in the valley. However, the valley is reported to be a major residential location for gaming-industry workers because of the lack of available housing and the high prices of land and houses at the lake. Several of the casinos have their own shuttles that pick up employees in the valley and take them to work at their facilities at the lake.

For that reason, the gaming industry at Lake Tahoe and other areas in the region add to the demand for residential housing in the Carson Valley.

By industrial sector, employment in Douglas County shows the following pattern:

Table 6: Douglas County Employment by Industry

Industry	2003	2004	2005	2006	1st Quarter 2007
Total All Industries	20,879	21,685	21,622	21,645	21,414
Total Private Coverage	18,696	19,456	19,333	19,347	19,140
Natural Resources & Mining	162	181	176	175	160
Construction	1,740	1,934	2,183	2,029	1,846
Manufacturing	1,709	1,713	1,753	1,802	1,826
Trade, Transportation & Utilities	2,528	2,764	2,795	2,863	2,824
Information	235	221	197	230	214

Industry	2003	2004	2005	2006	1st Quarter 2007
Financial Activities	707	791	865	774	804
Professional & Business Services	1,230	1,396	1,572	1,702	1,527
Education & Health Services	802	884	1,054	1,149	1,149
Leisure & Hospitality	9,201	9,145	8,363	8,246	8,436
Other Services	373	377	350	361	336
Government	2,183	2,230	2,289	2,298	2,274

Source: Nevada Department of Employment, Training and Rehabilitation

Unfortunately, the gaming industry has been declining since 2003, from 9,201 in 2003 to 8,246 in 2006 for a decrease of more than 10%. The statistic for 2007 is for the first quarter only so it is not known whether the annual average will also show the slight increase indicated in Table 6. If the pattern of decline continues, then this sector will not stimulate additional housing demand in Douglas County in at least the near future.

The construction sector showed positive growth from 2003 through 2006 but the decline in the 1st Quarter of 2007 reflects the major recession that hit this industry in the past year. With serious turmoil in both the housing construction sector and the mortgage lending industry, it is not expected that there will be recovery any time soon.

Manufacturing appears to be relatively healthy, with an increase in employment of 6.8% between 2003 and the 1st Quarter of 2007. However, the Carson Valley has relatively few manufacturing employers and the number of workers reflects only about 8.4% of all employment, compared to a national average of about 9.8%. Diversifying the economic base and recruiting more higher wage manufacturing industries is a goal of regional economic development efforts.

Trade, transportation and utilities have been a growth sector, gaining 11.7% employment from 2003 to the 1st Quarter of 2007. In part, this reflects the growth of the retail trade industry in response to the increased population in the county.

The professional and business services sector has also shown strong growth, increasing by 24.1% over the period shown in Table 6. This is the fastest-growing sector in the U.S. economy and the data show that Douglas County is participating in that growth.

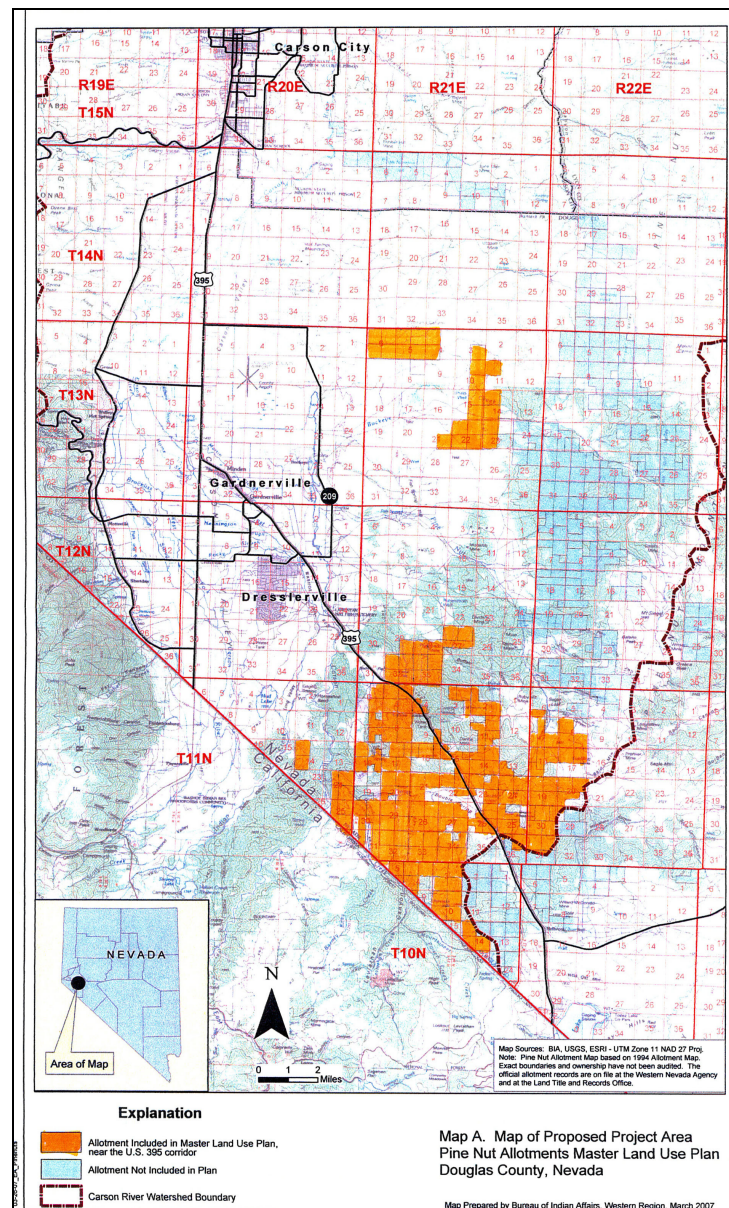
Education and health services showed the strongest growth, increasing by 43.3%. This sector also pays the highest annual mean wage in Douglas County at \$42,853 according to the latest data available. It represented 5.4% of total employment in the county in the 1st Quarter of 2007.

In general, the current slump in the housing and mortgage finance industry is likely to cause static overall employment levels for at least the short term. The decline in gaming industry employment will also dampen growth in Douglas County. There are currently no obvious

“drivers” for rapid growth although there are continuous efforts to recruit new companies to the area through economic development efforts.

Growth and Development in Relation to the Allotment Areas

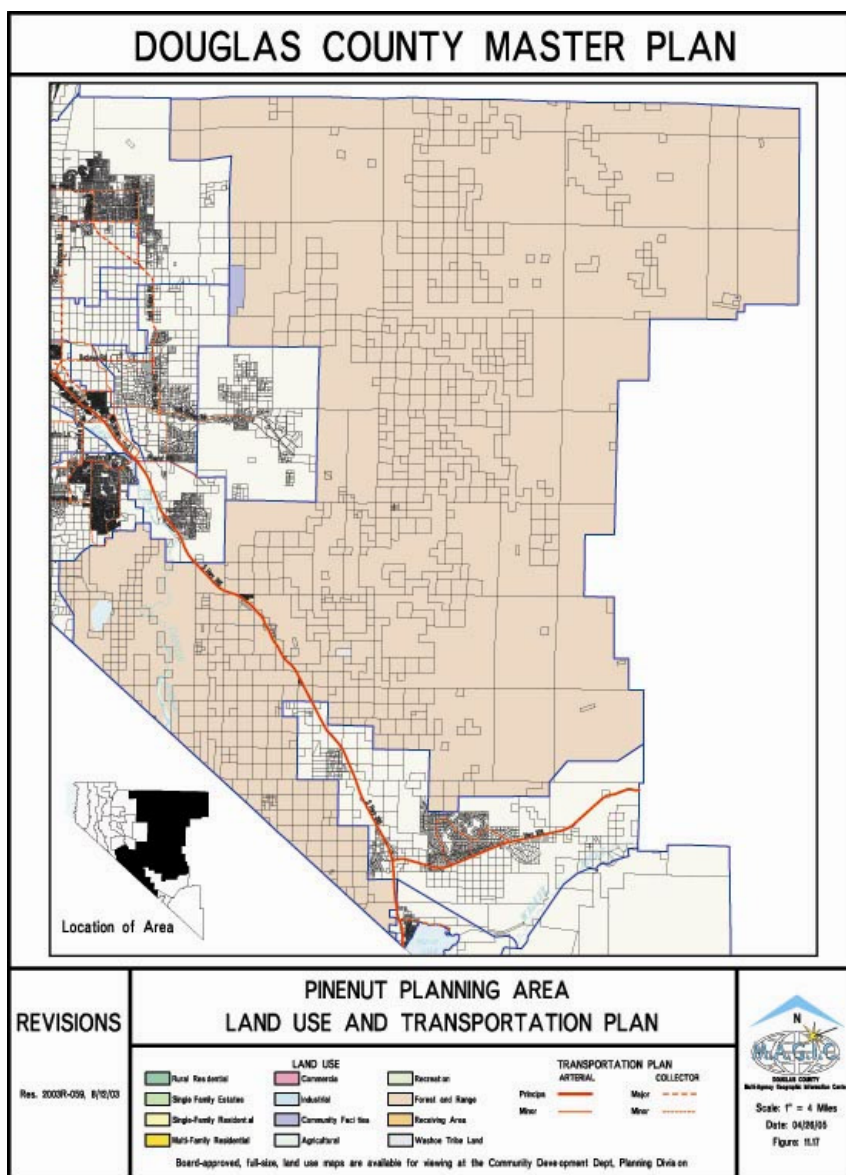
The map below shows the locations of the Pine Nut Allotment Areas in relation to other parts of Douglas County. Only the allotments shaded in orange are included in this report.



The allotments are essentially divided into two parts. The two sections of allotments northeast of Gardnerville are referenced herein as the “northern” allotments. These are located east of the Minden – Lake Tahoe Regional Airport and are in relative proximity to new subdivision activities taking place in the county.

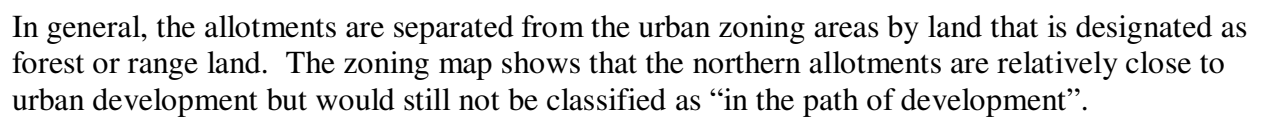
The remaining allotments are simply referenced as the Hwy 395 allotments. They are situated on both sides of Hwy 395 where the road crosses the Pine Nut Mountains.

One of the ways to visually observe the relationship between the allotments and existing growth and development in Douglas County is by cross-referencing the map above with the County’s master plan for the Pine Nut area.



11.069

The relationship of the allotments to potential development is also shown on the County's zoning map.



Some of the southern Hwy 395 allotments are close or adjacent to areas zoned for residential and limited commercial uses in the vicinity of Holbrook Junction. These are explored individually in this report.

Influences on the Allotment Areas

Based on the data provided above, it is found that the allotment areas are subject to overall growth influences in Douglas County but do not have specific influences affecting their short-term or near-term development potentials. Development of individual allotments will be in response to opportunities as they arise but cannot be predicted in advance based on development patterns and trends.

Part 2: Development Suitability by Areas

A. Northern Allotments Area

The two blocks of allotments that comprise the northern allotments area appear to offer the best opportunities for larger scale development, either as residential subdivisions or as a planned community such as a senior retirement center or golf course resort. The land in both blocks is relatively flat, accessible with road construction, and relatively close to existing developments. These allotments are situated within the area shown on the photo below, with the Minden – Lake Tahoe Regional Airport shown at the upper left corner for locational reference.

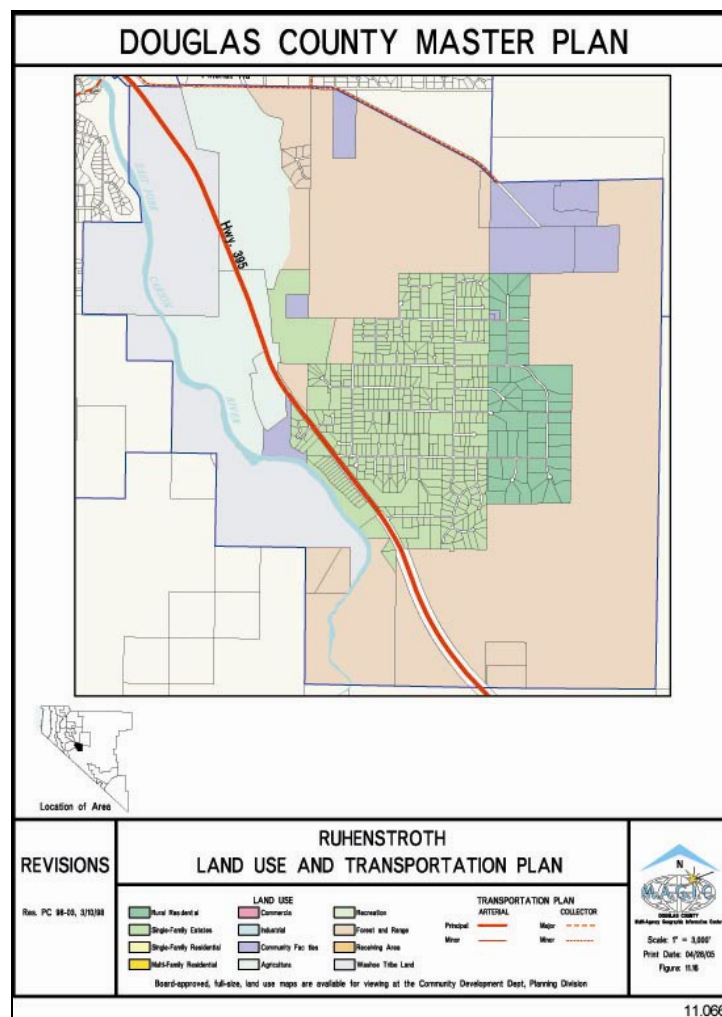


Aerial View of Northern Allotments Area

Issues of availability of infrastructure are not addressed in this report as they are examined in other reports. If there are no significant barriers to development, it appears that these allotments will have their greatest values if they are combined into the kinds of larger scale development described above.

B. Gardnerville Ranchettes, Pine View Estates area

This is the area at the northwest end of the Hwy 395 allotments where the road transitions between the Carson Valley and the Pine Nut Mountains. This area includes the Ruhenstroth Planning Area as well as the Pine View Estates.

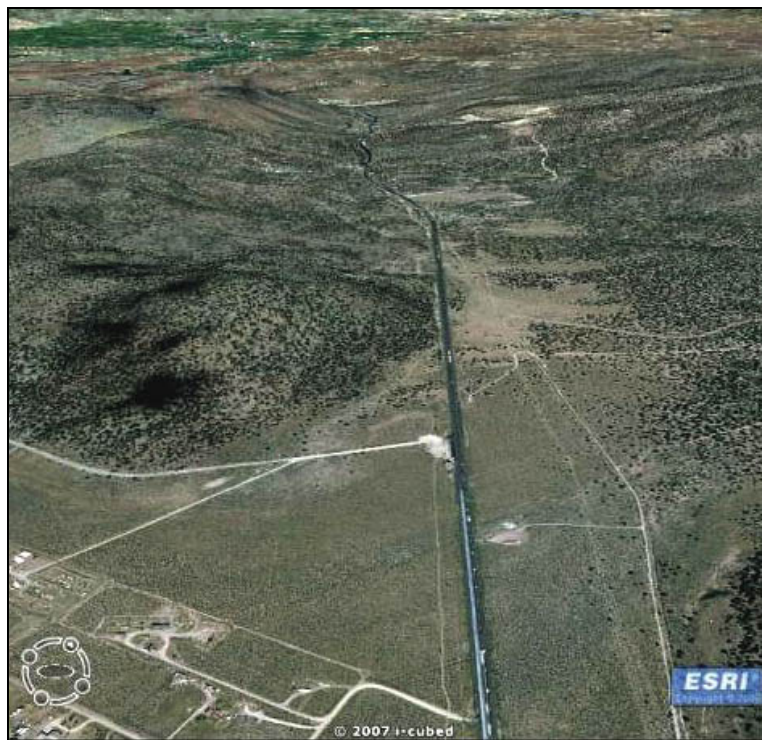


The Ruhenstroth Planning Area is the last area of urban zoning southeast of the Gardnerville Ranchettes before leaving the Carson Valley and climbing the grade into the Pine Nut Mountains. As the map shows, this planning area also includes large tracts of land owned by the Washoe Tribe.

The Ruhenstroth community area includes approximately 5,089 acres of land area. Agricultural lands located to the west and northwest of the community comprise 485 acres or 10 percent of the total land. Open space and vacant lands comprise over 48 percent of the land. These perimeter lands and their land uses surround the housing area of Ruhenstroth, providing an open space buffer for the community.

The community population is estimated at about 1,600 people. The predominant lot size is one acre in the residential area. The area also has some industrial uses, primarily related to resource industries and service facilities.

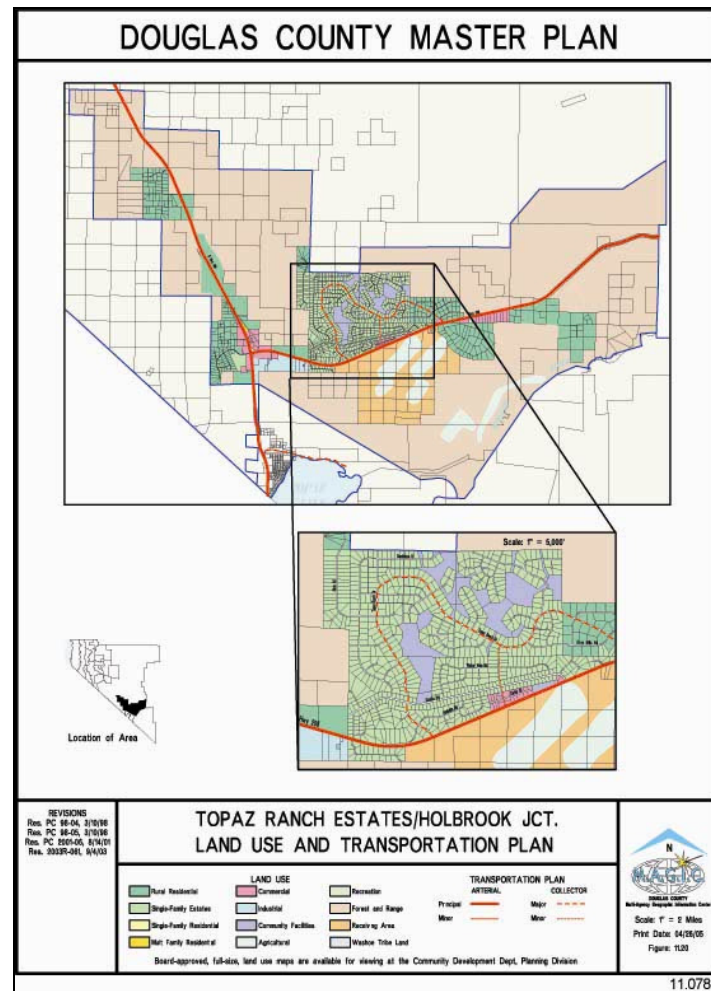
Further development of this area may cause residential demand to extend southeastward into the Pine Nut allotments. Some of the allotments offer better view properties because of the elevation gains. There are also some allotments suited for single-family developments both southwest and northeast of Hwy 395. It is expected that any such demand will be on an individual lot basis rather than for planned subdivisions such as Pine View Estates. Average lot sizes will be in the range of one-acre to two-acres.



Looking North from Leviathan Mine Road toward Gardnerville

C. Holbrook Junction area

The Holbrook Junction area offers the only commercial facilities along Hwy 395 through the Pine Nut Mountains, along with the lodge and other services at Topaz Lake. This is also designated as the Topaz - Holbrook Planning Area by Douglas County.



As the map shows, this area has several planned developments and/or subdivisions in addition to the commercial facilities at Holbrook Junction. Areas along Hwy 395 are platted for lots ranging in size generally from one acre to five acres. While some of these have been built out, there are still many lots available for sale or for resale.

There is also a long-term plan to construct up to 5,000 residential units on the east side of Topaz Lake.

This area essentially anchors the southern end of the Pine Nut allotments. That puts residential communities at both ends of the Hwy 395 corridor, along with some commercial facilities. As the county's population grows, it can be expected that demand for residential land will gradually infill toward the middle.



Looking South from Leviathan Mine Road toward Topaz Lake

D. Central Hwy 395 area

The central area of Hwy 395 includes the relatively flat plain shown in the photo above along with some sites on both sides of the highway that have little or moderate slopes. It consists of all the area between Pine View Estates on the north to the Holbrook Junction area to the south.

The small amount of residential development in this area is comprised of single-family homes, generally on small acreages. There are some properties developed specifically for horse ranches offering a rural lifestyle that may not be available in the more urbanized areas. Most lots range from two to five acres in size.

Any additional development in this area will probably fit the same pattern. This is not an area that is conducive to residential subdivisions, in part because of its relative isolation from community services and also because of more severe winter weather conditions that would impact workers commuting to jobs in Gardnerville or Minden. That will also limit the development of community infrastructure systems, favoring wells and septic systems that also suggest larger lots.

E. East/west of Hwy 395 areas

All of the remaining allotments are located in the rugged hills, valleys and mountains farther off Hwy 395. The two photos below give an idea of the terrain in those areas.



Looking West toward Sierra's from Leviathan Mine Road



Looking East to Pine Nut Mountains from Leviathan Mine Road

On-site inspections of these mountainous areas showed that they are suited only for recreational, cultural, or resource uses. Most of the slopes are too steep for any kind of development, including construction of wells and septic systems. While there are some spectacular views from some of the higher areas, the severe winter weather conditions above about 6,500 feet would completely isolate these areas for several months of each year.

Part 3: Summary of Land Use Designations by Area

Land use designations assigned to each area are summarized as follows:

A. Northern allotments

Most suitable area for development. Favors larger scale planned development such as residential subdivisions or self-contained communities such as a retirement center or resort. Also suitable for multiple lots but economies of scale in developing infrastructure support higher densities.

B. Northwest transition area between Pine Nut Mountains and Carson Valley

Several allotments suitable for single-family residential development or small subdivisions on the flatter parcels. Lot sizes generally in the one-acre to two-acre size range. Family housing to support workers commuting to jobs in Gardnerville or Minden.

C. Topaz Lake – Holbrook Junction area

Some of the allotments at the southern end of the Pine Nut Mountains could be developed for horse ranches or other “lifestyle” homesites similar to existing subdivisions. Lot sizes would be in the two-acre to five-acre range. The market is currently soft but the area is expected to grow.

D. Central Hwy 395 allotments

Flatter allotment areas close to Hwy 395 are suitable for single-family residential development for families that want relative isolation and a rural lifestyle. Difficult commuting during the winter months, so the area is not suited for family-oriented subdivisions. Lots generally in the two-acre size range.

E. Allotments east and west of Hwy 395

Beyond the flatter areas, there is essentially no development potential. These areas should be retained for cultural, recreational, or resource uses.

APPENDIX E
GROUNDWATER SUPPLY
AND FEASIBILITY

WORKING PAPER

Pine Nut Allotments (NV) Land Use and Development Plan

Groundwater Supply and Feasibility

Prepared by: GSI Water Solutions, Inc., 17 December 2007

Introduction

This working paper evaluates groundwater development potential for the Pine Nut Allotments, located in the Carson Valley of west-central Nevada (Figure 1). Groundwater development potential for the Pine Nut Allotments is determined by groundwater availability, groundwater quality, and sustainability of using the groundwater resource as a domestic water supply for individual land holdings. Groundwater availability is evaluated with geologic and hydrogeologic data (i.e., geologic maps and State of Nevada Water Well Reports), which indicate groundwater yield potential and distribution of geologic units in the project area. Groundwater quality is evaluated by compiling groundwater chemistry analyses from private and public wells in the project area. Groundwater sustainability is evaluated by estimating a groundwater budget for the project area and comparing the expected groundwater demand of the proposed development to the quantity of groundwater that is available. This evaluation of groundwater development potential includes:

- Regional geology and hydrogeology of the Carson Valley, and
- Geology, hydrogeology, groundwater quality, and groundwater budget for the Pine Nut Allotments.

For planning purposes, we have assumed that the minimum well capacity necessary to satisfy single-dwelling residential water use is 5 to 10 gallons per minute (gpm). The Pine Nut Allotments included in this groundwater development potential evaluation form two clusters—one on the eastern margin of the Carson Valley (northern Pine Nut Allotments) and another on the southern margin of the Carson Valley (southern Pine Nut Allotments) (Figure 2). The physical settings of the northern and southern Pine Nut Allotments are distinct; therefore, geology, hydrogeology, groundwater quality, groundwater budgets, and groundwater development potential are discussed separately.

The objective of this working paper is to evaluate the feasibility of developing the groundwater resource for the northern and southern Pine Nut Allotments. The goals of this working paper are to:

- Summarize groundwater availability, groundwater quality, and groundwater sustainability for the northern and southern Pine Nut Allotments, and
- Assess groundwater development potential for the northern and southern Pine Nut Allotments.

Regional Geology and Hydrogeology of the Carson Valley

Regional geology and hydrogeology of the Carson Valley has been summarized by the United States Geological Survey (USGS). This discussion of regional Carson Valley geology and hydrogeology is developed from USGS professional papers (i.e., Maurer, 1986; Maurer and Berger, 2006; Jeton and Maurer, 2007), geologic maps (Moore, 1969), and conversations with the USGS (i.e., personal

communication, 2007). These references were used to evaluate groundwater development potential of the northern and southern Pine Nut Allotments.

Regional Setting

The Carson Valley is an arid, high-desert basin bounded by the Sierra Nevada Mountains to the west and the Pine Nut Mountains to the east (Figure 1). The Sierra Nevada Mountains reach 11,000 feet above mean sea level (amsl), and the slightly lower Pine Nut Mountains reach 9,000 feet amsl. The valley floor elevation ranges from 4,600 to 5,000 feet amsl (USGS, 2007). Located in the rain shadow of the Sierra Nevada, the Carson Valley floor receives an average 10 inches of precipitation per year, while the Sierra Nevada and Pine Nut Mountains receive as much as 45 and 26 inches of precipitation per year, respectively (USGS, 1986).

The most significant surface water feature in the Carson Valley is the Carson River, which flows northward through the central part of the valley. The Carson River drains several ephemeral drainages originating in the Sierra Nevada and Pine Nut Mountains, and is a major source of irrigation water.

Regional Geology

The Carson Valley was formed by volcanic, tectonic and erosional events during the past 240 million years. The oldest geologic units in the Carson Valley are 138 to 240 million year old volcanic and sedimentary rocks deposited in the Jurassic and Triassic Periods. During the Cretaceous Period (63 to 138 million years ago), granitic magma of the Sierra Nevada batholith intruded into the Jurassic and Triassic sedimentary rocks, forming the basement rock of the Carson Valley and a majority of the Pine Nut and Sierra Nevada Mountains. A long period of erosion followed the intrusion, until approximately 10 million years ago when basin and range faulting created present day topography by dropping the valley floor and uplifting the Sierra Nevada and Pine Nut Mountains. Erosion of the newly-formed highlands resulted in deposition of Tertiary Sediments, consisting of 40 to 80 foot thick clay beds with 10 to 20 foot thick sand and gravel interbeds over most of the valley floor. Continued faulting between 15 and 5 million years ago tilted the Tertiary sediments towards the west, and Tertiary Andesites and Basalts erupted along the southern and western sides of the valley. During the last 2 million years, continued erosion of highlands filled the Carson Valley, covering the Tertiary Sediments with Quaternary Alluvium. The combined thickness of basin fill in the Carson Valley (i.e., Tertiary Sediments and Quaternary Alluvium) ranges from 5000 feet to 2000 feet on the west and east sides of the valley, respectively.

Regional Hydrogeology

Groundwater in the Carson Valley flows from the margins of the valley towards the Carson River in the center of the valley, and then northward along the Carson River. The United States Geological Survey identifies three water-bearing units in the Carson Valley, including (USGS, 1986):

- **Unconsolidated Alluvium.** Unconsolidated alluvium includes alluvial fan, eolian, and fluvial deposits less than 2 million years old, and is the primary aquifer in the Carson Valley. Groundwater yield from wells completed in the unconsolidated alluvium is sufficiently high to support irrigation, municipal and domestic demands. Depth to groundwater in the unconsolidated alluvium ranges from 5 feet below ground surface (bgs) near the Carson River to greater than 100 feet bgs at the margins of the valley.

- **Tertiary Sediments.** Tertiary Sediments include clays with interbedded discontinuous sand and gravel lenses. Sand and gravel zones in the Tertiary Sediments supply water primarily for domestic purposes.
- **Bedrock.** Bedrock includes Triassic and Jurassic sedimentary and volcanic rocks, as well as granitic intrusions of the Cretaceous Age. Fractured zones in the volcanic and sedimentary rock supply water primarily for domestic purposes. Few wells are completed in the Cretaceous Granite, which occurs at considerable depths in the valley (i.e., > 1000 feet).

Northern and Southern Allotment Geology, Hydrogeology, Groundwater Quality, and Groundwater Budget

Geology, hydrogeology, groundwater quality, and groundwater budgets are used to evaluate the groundwater development potential for the Pine Nut Allotments, and were summarized from State of Nevada Water Well Reports (NDWR, 2007), Environmental Assessments (CSCON, 2006a; CSCON, 2006b), and USGS reports. Because the geology, hydrogeology, groundwater quality, and groundwater budgets for the northern and southern Pine Nut Allotments are distinct, they are discussed separately.

Northern Pine Nut Allotments

The northern Pine Nut Allotments are located in the margin of the Carson Valley, in Township 13 North, Range 21 East (Figure 2). The northern Pine Nut Allotments are situated in the drainage of Buckeye Creek, an ephemeral creek that drains the Pine Nut Mountains to the east.

Geology

Figure 3 shows geology of the southeast Carson Valley. The northern Pine Nut Allotments are underlain by Tertiary Sediments (Ts) and Quaternary Alluvium (Qal, QToa). Driller's logs from wells drilled near the northern Pine Nut Allotments indicate that the Tertiary Sediments are relatively thick (up to 705 feet in log 18285) and the Quaternary Alluvium is thin (ranging from 20 feet to 68 feet in logs 33370, 75028, 89035, 47191 and 65348).

Hydrogeology

Figure 4 shows geology and the occurrence of wells for each section of the southeast Carson Valley. In the vicinity of the northern Pine Nut Allotments, the majority of groundwater wells have been drilled in alluvium, and a minor number of wells have been drilled in the Tertiary Sediments. Alluvium underneath the northern Pine Nut Allotments is generally unsaturated; therefore, groundwater development potential for the northern Pine Nut Allotments focuses on the Tertiary Sediments. Few wells have been drilled in the northern Pine Nut Allotments.

State of Nevada water well reports indicate that groundwater in the vicinity of the northern Pine Nut Allotments occurs at moderate depths (i.e., an average of 72.7 feet in Township 13 North, Range 21 East), and that well depths range from 80 to 495 feet bgs. Figure 5 is cross sectional view of northern Pine Nut Allotment geology along the A to A' transect. The location of the A to A' transect is shown in Figure 3. Wells drilled in Tertiary Sediments obtain water from 10 to 20 feet thick, discontinuous gravel interbeds in the silt and clay. If gravel interbeds are not encountered when drilling a well in the Tertiary Sediments, then the well may not produce water (e.g., Well 18285, shown in Figure 5). State of Nevada water well reports indicate that well yields range from 7 to greater than 35 gallons per minute (gpm) in the Tertiary Sediments.

Groundwater Quality

Groundwater quality results from a single well near the northern Pine Nut Allotments are listed in Table 1 and shown on Figure 2. Groundwater chemistry in the well meets drinking water standards established by the Environmental Protection Agency (EPA) [i.e., Maximum Contaminant Levels (MCLs) and Secondary Standards)]. Because the groundwater quality results in the northern Pine Nut Allotments are from a single well, definitive conclusions about groundwater quality cannot be made.

Groundwater quality results from other parts of the Carson Valley (e.g., near the southern Pine Nut Allotments) indicate that arsenic, sulfate, manganese and dissolved iron exceed either EPA MCLs or Secondary Standards; therefore, groundwater quality in the vicinity of the northern Pine Nut Allotments should be tested, and possibly treated, prior to groundwater development.

Groundwater Budget

A groundwater budget has been developed for the eastern Carson Valley by the USGS, and is shown in Figure 6. Groundwater recharge in this region originates from aerial precipitation on quaternary eolian sand (140 acre-ft/year) (Maurer and Berger, pg. 26, 2006) and inflow from Buckeye Creek, Pine Nut Creek, and subflow from underlying Mesozoic basement rock (4,300 to 15,000 acre-ft/year) (Maurer and Berger, pg. 32 - 35, 2006). This corresponds to an annual recharge rate on a per acre basis ranging from 5,306 ft³/acre to 18,513 ft³/acre. Groundwater leaves the Tertiary Sediments by discharge to the unconsolidated alluvium within the Carson River drainage. Groundwater in the unconsolidated alluvium then discharges to the Carson River or flows north along the regional groundwater flowpath.

Because the evapotranspiration rate in the area exceeds average annual rainfall and because the soils in the upland areas have an extreme moisture deficit, most precipitation does not infiltrate to the groundwater system. It is only during extreme rainfall events or after extended wet periods does most groundwater recharge occur. Most of this recharge is focused within drainage basins and therefore is likely not uniform.

USGS water budget estimates are available at the drainage-wide scale only (e.g., Buckeye Creek). The northern Pine Nut Allotments occupy a relatively small area in the Buckeye Creek drainage; therefore, it is difficult to estimate a quantitative groundwater budget for the northern Pine Nut Allotments. Because the regional water budget indicates that groundwater recharge is low, it can be concluded that aquifers on the northern Pine Nut Allotments receive relatively little recharge, and groundwater from pumping primarily comes from aquifer storage. Consequently, the groundwater system in this area is highly sensitive to over-pumping.

Southern Allotments

The southern Pine Nut Allotments are located on the southern margin of the Carson Valley, east and west of US-395 in portions of (Figure 2):

- Townships 10 North, 11 North and 12 North in Range 21 East, and
- Township 11 North in Range 22 East.

No major drainages are present in the southern Pine Nut Allotments.

One multi-dwelling residential development (i.e., Pine View) and at least two proposed residential developments (i.e., Buffalo Run and Pinion Pointe) are located in the southern Pine Nut Allotments. Wells have been drilled at each development, and are discussed in the following sections.

Geology

Figure 3 shows geology of the southeast Carson Valley. West of US-395, the southern Pine Nut Allotments are underlain primarily by Tertiary Basalts (Ta) (although the geologic map identifies Ta as Tertiary Andesites, the unit is basalt in the vicinity of the southern allotments). East of US-395, the southern Pine Nut Allotments are underlain primarily by Jurassic sedimentary rocks (JTrs, JTv). Minor amounts of Quaternary Alluvium (Qal, QToa) have been identified along US-395. The mountains east and west of US-395 are composed of Tertiary Basalts and Jurassic sedimentary rocks. The Quaternary Alluvium is a valley fill deposit, and therefore, exhibits a wide range of thicknesses (from 98 feet in log 16522 to 780 feet in the “new well” for the Buffalo Run development). Driller’s logs from wells drilled near the northern Pine Nut Allotments indicate that the Jurassic sedimentary rocks and Tertiary Basalts are relatively thick (480 feet thick in log 46479 and 1580 feet thick in log 93374, respectively).

Hydrogeology

Figure 4 shows geology and the occurrence of wells for each section of the southeast Carson Valley. In the vicinity of the southern Pine Nut Allotments, a majority of the groundwater wells are completed in the Quaternary Alluvium and Tertiary Basalts. Only a few wells are completed in the Jurassic sedimentary rocks.

Depth to groundwater in the vicinity of the southern Pine Nut Allotments ranges from 8 to 476 feet bgs in Township 11 North Range 21 East. Large depths to groundwater are encountered at higher elevations, while shallower groundwater depths are encountered at lower elevations in alluvium filling minor drainage basins. Figure 7 is cross sectional view of southern Pine Nut Allotment geology along the B to B’ transect. The location of the B to B’ transect is shown in Figure 3. Wells drilled in Quaternary Alluvium obtain water from pore spaces between gravel and sand grains, and wells drilled in the Tertiary Basalts and Jurassic sedimentary rocks obtain water from 10 to 50 foot thick zones of fractured rock. If shallow fracture zones are not encountered, wells located in the southern Pine Nut Allotments may have to be drilled to significant depths (e.g., log 93374, drilled to a depth of 1580 feet bgs). State of Nevada water well reports indicate that well yields in the basalt range from 4 to 200 gpm, well yields in the alluvium range from 15 gpm (where alluvium is thin) to 300 gpm (where alluvium is thick), and well yields in the sedimentary rocks range from 5 to 10 gpm.

Groundwater Quality

Groundwater quality results from five wells in the vicinity of the southern Pine Nut Allotments are listed in Table 1 and shown on Figure 2. Three of the five groundwater quality results are from groundwater samples collected at wells on the southern Pine Nut Allotments (i.e., Buffalo Run, Buffalo Run#1, and Pinion Point). The groundwater chemistry results indicate that:

- Nitrates were detected in four of five groundwater samples collected in the vicinity of the southern Pine Nut Allotments. Nitrates in groundwater are commonly due to septic effluent and fertilizers (e.g., Kehew, et al., 2001). Nitrate concentrations are below Environmental Protection Agency (EPA) Maximum Contaminant Levels (MCLs) for drinking water, which are legally-enforceable drinking water standards for public water supply systems.
- Arsenic was detected in four of five Carson Valley groundwater samples collected in the vicinity of the southern Pine Nut Allotments. In one groundwater sample (Pinion Point), located on the southern Pine Nut Allotments, the arsenic concentration exceeded EPA MCLs.
- Sulfate, dissolved iron, and manganese exceeded EPA National Secondary Drinking Water Standards (EPA, 2003) at one or more sample locations. EPA secondary standards are guidelines for contaminants that, when exceeded, may cause deleterious cosmetic effects (e.g., skin or tooth discoloration).

Groundwater chemistry results in the vicinity of the southern Pine Nut Allotments do not prohibit development of the groundwater resource. However, treatment may be required prior to use of groundwater.

Groundwater Budget

As was the case for the Northern Allotment area, a quantitative groundwater budget is not available for the Southern Allotment area; however, we can extrapolate from the regional water budget constructed by the USGS for the eastern Carson Valley. No perennial or ephemeral drainages are located near the southern Pine Nut Allotments; therefore, surface water does not contribute to recharging the Tertiary Basalts, Jurassic sedimentary rocks, or Quaternary Alluvium. Groundwater enters the Tertiary Basalts, Jurassic sedimentary rocks, and Quaternary Alluvium by underflow from the valley located south of the Carson valley. It is likely that a small amount of groundwater enters the Quaternary Alluvium by recharge from aerial precipitation. Groundwater discharges from the Tertiary Basalts, Jurassic sedimentary rocks, and Quaternary Alluvium into several springs (e.g. Double Spring), the Carson River, and the alluvial valley fill.

Consistent with the northern Pine Nut Allotments, most groundwater in the southern Pine Nut Allotments occurs as a result of historic precipitation when the climate was wetter. As discussed previously for the Northern Allotment Area, aquifers in the eastern Carson Valley receive relatively little recharge, and groundwater from pumping primarily comes from aquifer storage. Consequently, the groundwater system in this area is also highly sensitive to over-pumping.

Northern and Southern Allotment Groundwater Development Potential

Groundwater development potential for the northern and southern Pine Nut Allotments is estimated from the geology, hydrogeology, groundwater chemistry, and groundwater flow budget discussed in previous sections. Because the geology, hydrogeology, and groundwater budgets of the northern and southern Pine Nut Allotments are distinct, the groundwater development potentials are discussed separately.

Northern Allotment Groundwater Development Potential

Geology, hydrogeology, groundwater flow budget, and groundwater chemistry in the vicinity of the northern Pine Nut Allotments indicate that:

- Regionally, alluvium is the primary aquifer in the Carson Valley; however, alluvium in the vicinity of the northern Pine Nut Allotments does not appear to be saturated. Therefore, northern Pine Nut Allotments would derive groundwater from wells completed in Tertiary sediments.
- Groundwater is available from gravel and sand interbeds of the Tertiary Sediments. Domestic wells installed in the Tertiary Sediments indicate that the gravel and sand interbeds produce groundwater at rates ranging from 7 to 35 gpm.
- The water budget for the northern Pine Nut Allotments indicates that use of Tertiary Sediments to support multi-dwelling residential demand would likely not be sustainable.
- Groundwater quality analyses for wells in the vicinity of the northern Pine Nut Allotments are limited; however, available groundwater quality analyses indicate that pretreatment for nitrates, arsenic, sulfate, iron, and manganese may be necessary prior to groundwater use for domestic purposes.
- Overall, it is our opinion that Tertiary Sediments in the northern Pine Nut Allotments have a marginal potential for groundwater development. **The northern Pine Nut Allotments may be able to support a residential development density of 1 to 2 dwellings per acre. The availability of groundwater appears to be quite variable depending on location and so test wells are advisable to confirm yield. Likewise, we have significant concerns about the sustainability of groundwater development due to the poor recharge. Because of the limited**

recharge, pumping over time may result in water level declines and reduced yields. Consequently, we believe that it is prudent to disclose these concerns in all lease agreements.

- Groundwater in the northern allotments does not appear to be able to support commercial or industrial demand nor is there an adequate supply to support a golf course.

Southern Allotment Groundwater Development Potential

Geology, hydrogeology, groundwater flow budget, and groundwater chemistry in the vicinity of the southern Pine Nut Allotments indicate that:

- Groundwater is available from Quaternary Alluvium, and fractured zones within Tertiary Basalt and Jurassic sedimentary rocks.
- Groundwater yields from thick alluvium sequences and fractured zones in basalt are sufficient to support single-dwelling and multi-dwelling domestic demand. Examples of multi-dwelling domestic demand being satisfied by a single well include Pinion Pointe, China Springs Youth Camp, and Pine View. However, it is more common for multiple wells to be drilled to meet multi-dwelling domestic demand [i.e., Buffalo Run, which drilled Well 1 (40 gpm), Well 2 (15 gpm), Well 3 (15-20 gpm), Well 4 (115 gpm) and Well 5 (135) to satisfy multi-dwelling domestic demand].
- Groundwater yields from Jurassic sedimentary rocks (i.e., 5 to 10 gpm) are sufficient only to support single-dwelling residential demands.
- Groundwater quality analyses in the vicinity of the southern Pine Nut Allotments indicate that pretreatment for nitrates, arsenic, sulfate, iron, and manganese may be necessary prior to groundwater use.
- In our opinion, Quaternary Alluvium and Tertiary Basalt units have moderate potential for groundwater development. **Quaternary Alluvium and Tertiary Basalt in the Southern Pine Nut Allotments may be able to support a residential development density of 1 to 2 dwellings per acre. Some wells in the area indicate that the Quaternary Alluvium and Tertiary Basalt in the Southern Pine Nut Allotments may be able to support higher residential development densities (e.g., the well located in the Pine View development). The availability of groundwater appears to be quite variable depending on location and so test wells are advisable to confirm yield. Likewise, we have significant concerns about the sustainability of groundwater development due to the poor recharge. Because of the limited recharge, pumping over time may result in water level declines and reduced yields. Consequently, we believe that it is prudent to disclose these concerns in all lease agreements.**
- In our opinion, allotments located on Jurassic sedimentary rocks have minimal to no potential for groundwater development.

Data Sources

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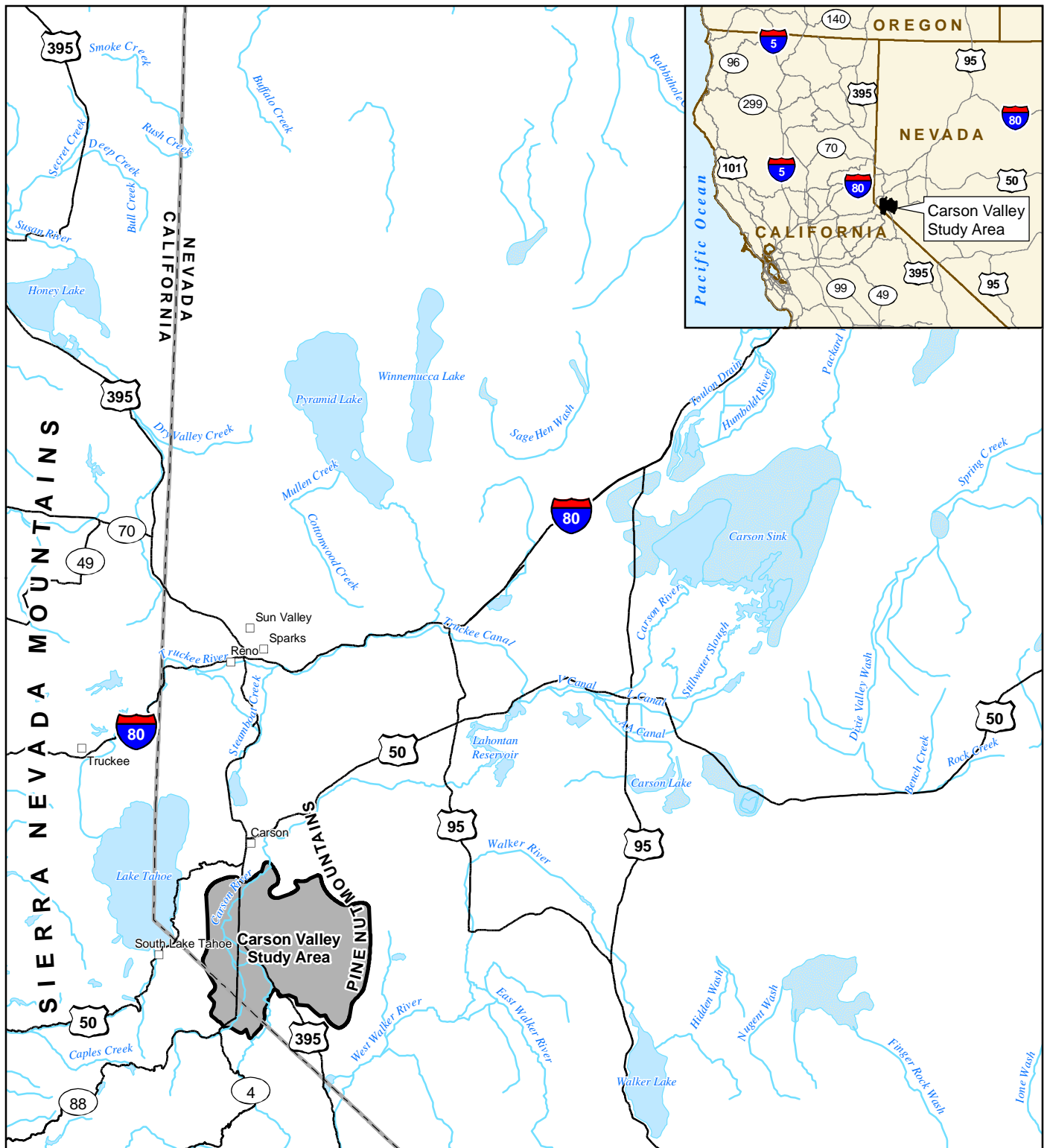
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LEGEND

- Carson Valley Study Area
- Cities
- Freeways and Highways
- Rivers and Streams
- Lakes and Reservoirs
- Dry Lakes
- State Boundary

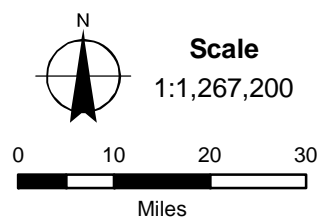


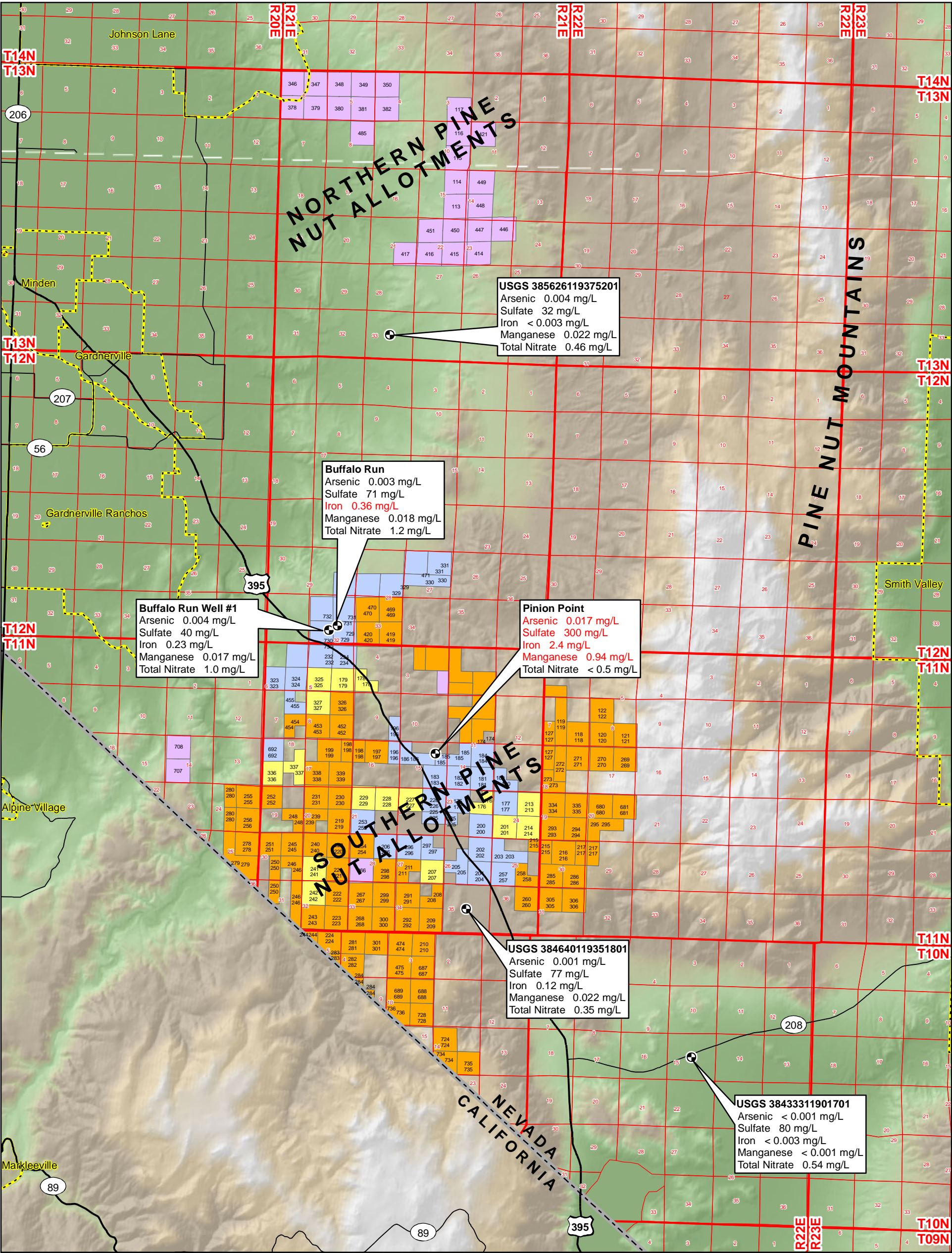
FIGURE 1

Carson Valley Study Area

Pine Nut Plan - Cascade Design

MAP NOTES:
 Projection: Universal Transverse Mercator Zone 11 North
 Datum: North American Datum of 1983
 Date: November 1, 2007
 Data Sources: USGS, ESRI





LEGEND

Developable

Marginal Development Potential

No Development Potential

Allotment Included in Master Land Use Plan

Wells (NA = Not Analyzed)

Cities

Freeways and Highways

Major Roads

State Boundary

Elevation

9425 feet

4550 feet

Scale

1:126,720

0 1 2 3 4

Miles

NOTE: Red highlighting indicates concentration exceeds Environmental Protection Agency maximum contaminant level.

FIGURE 2

Groundwater Chemistry Results

Pine Nut Plan - Cascade Design

MAP NOTES:

Projection: Universal Transverse Mercator Zone 11 North

Datum: North American Datum of 1983

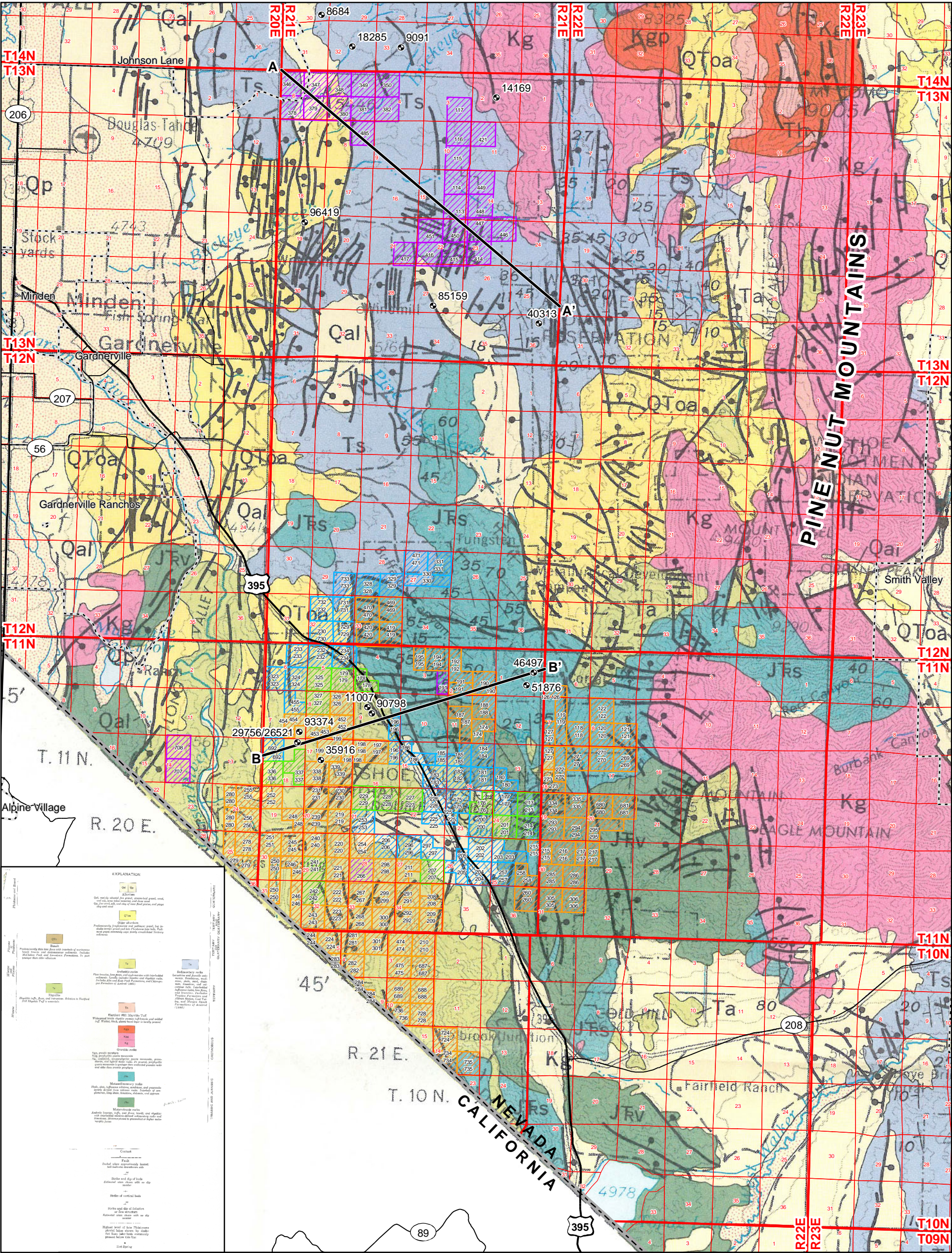
Date: October 31, 2007

Data Sources: USGS, ESRI

GSI

Water Solutions, Inc.

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LEGEND

- Water Wells used in Cross Section
- Geologic Cross Sections
- Developable
- Marginal Development Potential
- No Development Potential
- Allotment Included in Master Land Use Plan
- Cities
- Freeways and Highways
- Major Roads
- State Boundary

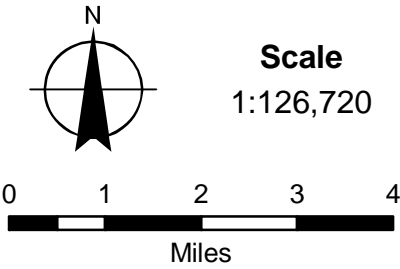
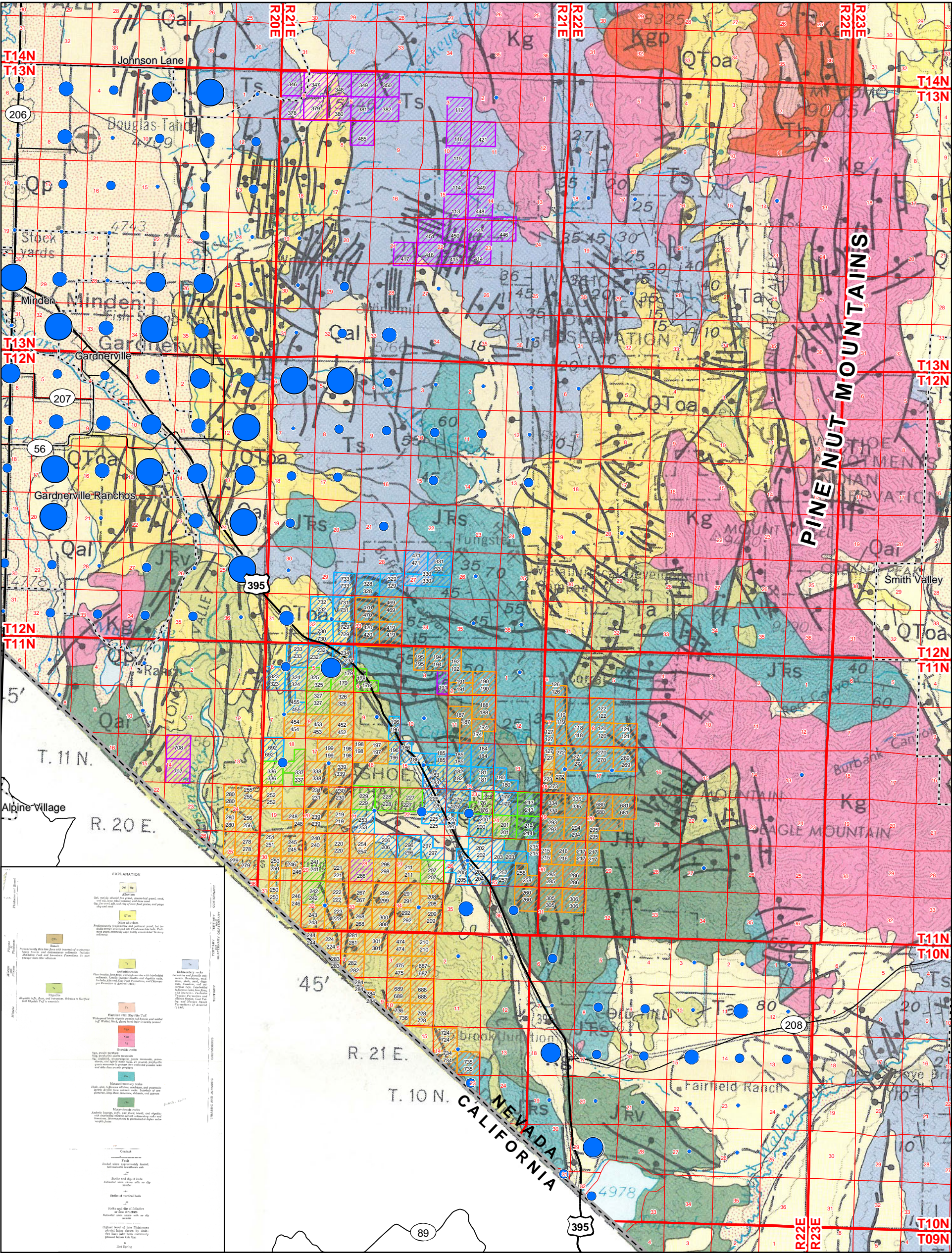


FIGURE 3

Southeast Carson Valley Geology
Pine Nut Plan - Cascade Design

MAP NOTES:
Projection: Universal Transverse Mercator Zone 11 North
Datum: North American Datum of 1983
Date: November 1, 2007
Data Sources: USGS, ESRI



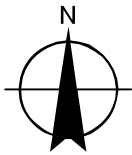


LEGEND

- Number of Wells**
- 1 - 2
 - 3 - 5
 - 6 - 10
 - 11 - 20
 - > 20

- Developable
- Marginal Development Potential
- No Development Potential
- Allotment Included in Master Land Use Plan
- Cities
- Freeways and Highways
- Major Roads

State Boundary



Scale
1:126,720

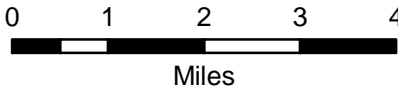
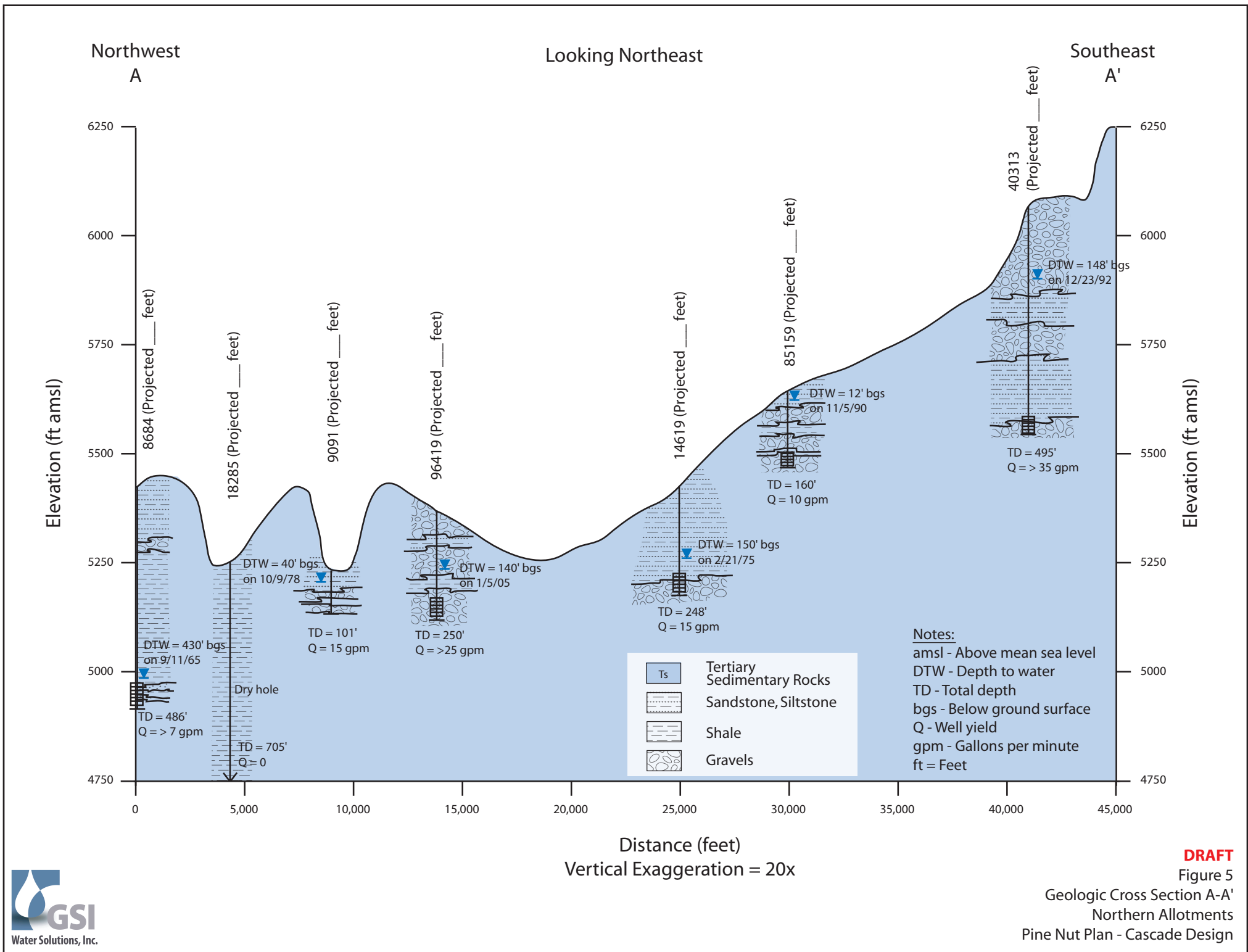


FIGURE 4
Occurrence of Wells in
Southeast Carson Valley
Pine Nut Plan - Cascade Design

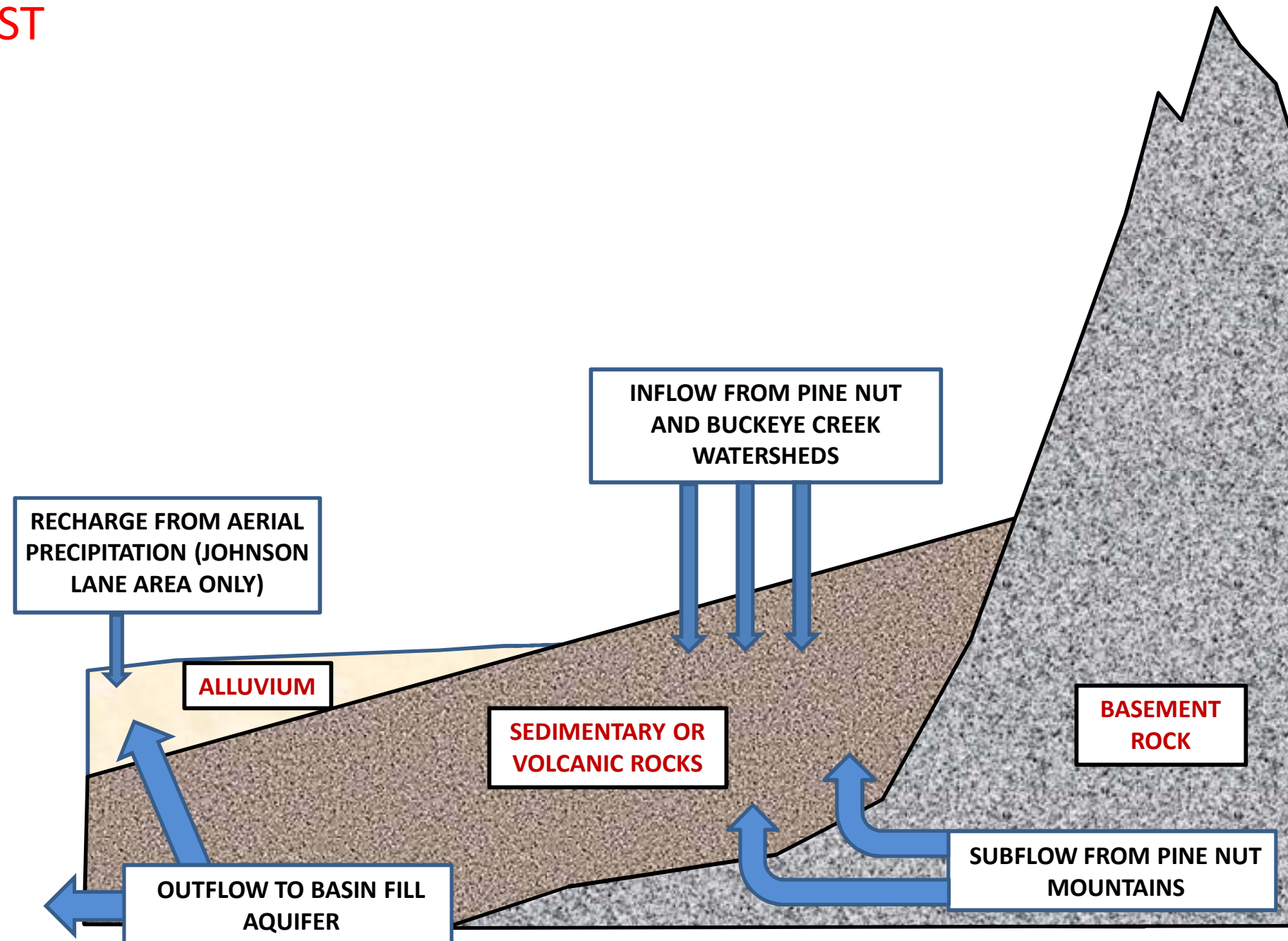
MAP NOTES:
Projection: Universal Transverse Mercator Zone 11 North
Datum: North American Datum of 1983
Date: November 1, 2007
Data Sources: USGS, ESRI





WEST

EAST



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DATE: NOV 2007
DESIGN: MK

Figure 6
Northern Allotment Water Budget
Pine Nut Plan – Cascade Design

Table 1
Groundwater Chemistry Results
Pine Nut Allotments (NV) - Land Use Development Plan

Analyte	Units	Regulatory Standard	Regulatory Criterion	USGS Observation Station Number ¹			Development Name		
				384640119351801	385626119375201	384333119301701	Pinion Pointe ²	Buffalo Run Well ³	Buffalo Run #1 ³
				T11N R21E Sec. 35	T13N R21E Sec. 33	T10N R22E Sec. 15	T11N R21E Sec. 15	T12N R21E Sec. 32	T12N R21E Sec. 32
				6/23/1987	6/16/1988	11/15/1985	5/30/2006	5/19/2005	6/29/2004
Temperature	degrees C			13	15.5	15	21.5	17.8	20.1
Specific Conductivity	mS/cm			437	437	538	----	----	----
Dissolved Oxygen	mg/L			----	5.5	----	----	----	----
pH	standard units	6.5 - 8.5	NSDWS	8	7.8	7.7	7.69	8.07	8.24
Turbidity	NTU			6.5	----	0.8	29	----	----
ORP	mV			----	290	----	----	----	----
Bicarbonate	mg/L			187	----	237	----	----	----
Calcium	mg/L			42	52	70	150	37	55
Carbonate	mg/L			----	----	----	----	----	----
Chloride	mg/L	250	NSDWS	6.9	5.8	3.6	----	----	6.2
Fluoride	mg/L			----	----	----	0.1	< 0.1	< 0.1
Hardness (as CaCO3)	mg/L			170	180	240	450	110	210
Magnesium	mg/L			16	12	16	19	5	17
Nitrate as N	mg/L	10	MCL	0.35	0.46	----	< 0.5	1.2	1
Nitrite as N	mg/L	1	MCL	< 0.01	< 0.01	0.02	----	----	----
Total Nitrite-Nitrate	mg/L			0.35	0.46	0.54	----	----	----
Potassium	mg/L			2.4	1.8	0.56	2	3.2	4.8
Silica	mg/L			48	28	25	----	----	----
Sodium	mg/L			27	27	19	30	38	28
Sulfate	mg/L	250	NSDWS	77	32	80	300	71	110
Alkalinity as CaCO3	mg/L			----	190	----	240	120	160
Antimony	mg/L	0.006	MCL	----	0.002	----	----	----	----
Arsenic	mg/L	0.01	MCL	0.001	0.004	< 0.001	0.017	0.003	0.004
Barium	mg/L	2	MCL	0.044	0.1	0.083	0.033	0.059	0.048
Beryllium	mg/L	0.004	MCL	----	< 0.0005	----	----	----	----
Boron	mg/L			0.02	0.02	0.01	----	----	----
Cadmium	mg/L	0.005	MCL	< 0.001	< 0.001	< 0.001	----	----	----
Chromium (total)	mg/L	0.1	MCL	< 0.01	< 0.005	< 0.01	----	----	----
Cobalt	mg/L	1.3	MCL	----	< 0.003	----	----	----	----
Copper	mg/L	1	NSDWS	<0.01	< 0.01	< 0.01	0.005	< 0.001	0.003
Iron (dissolved)	mg/L	0.3	NSDWS	0.12	< 0.003	0.009	2.4	0.36	0.23
Lead	mg/L	0.015	MCL	< 0.01	< 0.01	< 0.01	< 0.002	< 0.001	< 0.001
Manganese	mg/L	0.05	NSDWS	0.022	< 0.001	< 0.001	0.94	0.018	0.017
Molybdenum	mg/L			----	< 0.01	----	----	----	----
Mercury	mg/L	0.002	MCL	0.0003	< 0.0001	< 0.0001	----	----	----
Nickel	mg/L			----	< 0.01	----	----	----	----

Table 1
Groundwater Chemistry Results
Pine Nut Allotments (NV) - Land Use Development Plan

Analyte	Units	Regulatory Standard	Regulatory Criterion	USGS Observation Station Number ¹			Development Name		
				384640119351801	385626119375201	384333119301701	Pinion Pointe ²	Buffalo Run Well ³	Buffalo Run #1 ³
				T11N R21E Sec. 35	T13N R21E Sec. 33	T10N R22E Sec. 15	T11N R21E Sec. 15	T12N R21E Sec. 32	T12N R21E Sec. 32
				6/23/1987	6/16/1988	11/15/1985	5/30/2006	5/19/2005	6/29/2004
Selenium	mg/L	0.05	MCL	< 0.001	< 0.001	< 0.001	----	----	----
Silver	mg/L	0.1	NSDWS	< 0.001	< 0.001	< 0.001	----	----	----
Strontium	mg/L			----	0.53	----	----	----	----
Zinc	mg/L	5	NSDWS	0.058	0.004	0.014	0.02	0.018	0.06
Total Coliform	Present/Absent			----	----	----	----	Absent	Present
Fecal Coliforms	Present/Absent			Absent	----	----	----	Absent	Absent
Fecal Streptococci	Present/Absent			Absent	----	----	----	----	----
VOCs	mg/L			ND	ND	----	----	----	----
Disinfection ByProducts	mg/L			ND	ND	----	----	----	----

Notes:
mg/L = milligrams per liter
NTU = nephelometric turbidity units
mV = millivolts
C = Celcius
mS/cm = microsiemens per centimeter
ORP = oxidation reduction potential
VOCs = volatile organic compounds
EPA MCL = Environmental Protection Agency Maximum Contaminant Level
NSDWS = National Secondary Drinking Water Standards
T = Township
R = Range
Sec. = Section
N = North
E = East
¹ From National Water Information System: Web Interface. Available online at <http://nwis.waterdata.usgs.gov>. Downloaded by GSI in September 2007.
² From CSCON, 2006, "Pinion Pointe Environmental Assessment."
³ From CSCON, 2006, "Buffalo Run Environmental Assessment."

APPENDIX F

IMPACT ANALYSIS

Land Use and Development Procedural Plan for the Pine Nut Allotments (NV)

**U.S. Bureau of Indian Affairs
Western Regional Office**



Impact Analysis

July 2009

Prepared by



CASCADE DESIGN
PROFESSIONALS, INC.

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LAND USE AND DEVELOPMENT PROCEDURAL PLAN FOR THE PINE NUT ALLOTMENTS (NV) IMPACT ANALYSIS

INTRODUCTION

In May 2007, the Bureau of Indian Affairs, Western Regional Office, contracted with Cascade Design Professionals, Inc. to prepare a Land Use and Development Procedural Plan (Procedural Plan or Plan) for the Pine Nut Allotments, all of which are located in Douglas County, Nevada. The purpose of the plan is to guide the Bureau of Indian Affairs (BIA) in making decisions regarding revenue-producing development proposals that will require land leases on allotments. Initial planning efforts centered on identification of the “highest and best” use for allotments based on analyses of site development suitability, groundwater availability and quality, soil suitability, and development trends.

The purpose of this impact analysis is to evaluate the impact of the various designated land uses on the allotments and surrounding environment and to identify measures to mitigate those impacts. The results of this impact analysis and recommended mitigation measures will be used to recommend development standards and to develop an appropriate leasing structure that provides sufficient incentives to the developer while still ensuring the landowner of revenues commensurate with the value of the property over the entire lease term.

It is important to note that precise development impacts are impossible to forecast for those allotments included in this study for several major reasons. First of all, these lands are not under the jurisdiction of any city, county, or state government; and therefore, there is no comprehensive plan or public policies in place to assume that orderly conversion of certain lands for urbanization would occur over time. As a result, there is no zoning ordinance/zoning map or other development codes in place to designate appropriate land uses for specific areas or to control and direct development. Allotment owners are only subject to federal laws and regulations and to some extent have the right to develop their lands for any use they so desire, so restricting uses by traditional means, such as zoning, is not an option. Therefore, it is impossible to predict, on potentially developable allotments, exactly what types of development will occur, if at all, when development might occur, or where development may occur.

Compounding this situation is the fact that any moderate to large development will be driven by private sector developers in conjunction with allotment owners who are interested in leasing their land for residential, commercial, or industrial uses. A majority of the allotment owners must agree to any development proposal in order to go forward with a lease. An analysis of the ownerships showed that 70% of the allotments have more than 30 owners and some have as many as 150 owners. Only 17% of the allotments have 5 owners or less and 27% have 15 owners or less.

During the first round of public meetings, a number of allotment owners commented that this multiple ownership situation made for extreme difficulty in reaching a majority consensus concerning any use of their respective allotment or in some instances more than one allotment. In other cases, owners were emphatic that they considered their lands as sacred and wanted them left as they are in their natural state. Others expressed that the only development they would consider was for family members to build homes for themselves. As a result, it is anticipated that it will be difficult for a developer to get a majority consensus when dealing with more than just a few owners. It should be noted that the only existing development, the Pine View Estates, occurred on an allotment with only one owner.

Because of the unique situations, there is no way to predict the type of future development, nor which allotments will develop, nor the degree of development. As a result, this impact analysis will be limited to addressing general impacts based on one development scenario that would potentially produce the most severe impacts. Specific impacts and quantifiable impacts will need to be addressed in the leasing process through the requirement for each developer to prepare an Environmental Assessment or Environmental Impact Statement as the case may be.

DESCRIPTION OF AFFECTED ENVIRONMENT

The study area includes 176 allotments. For reference purposes, the allotments were separated into three groups. The two clusters of allotments northeast of Gardnerville are referred to as the "northern" and "northeastern" allotments. These groups comprise 26 allotments north-northeast of the Minden/Gardnerville urban area and east of the Minden – Lake Tahoe Regional Airport. The remaining 150 allotments are referred to as the "Hwy 395" allotments. These allotments are situated southeast of the Minden/Gardnerville urban area along both sides of Hwy 395 where the road crosses the Pine Nut Mountains. The study area is shown in Figure 1.

Information pertaining to the affected environment was primarily obtained from the March 2008 *Pine Nut Mountain Administrative Draft Plan Amendment and EIS* (prepared by TetraTech for the Bureau of Land Management (BLM) Carson City Field Office) and has been incorporated into this impact analysis where appropriate. Therefore, the March 2008 draft plan amendment and EIS is hereby acknowledged and referenced.

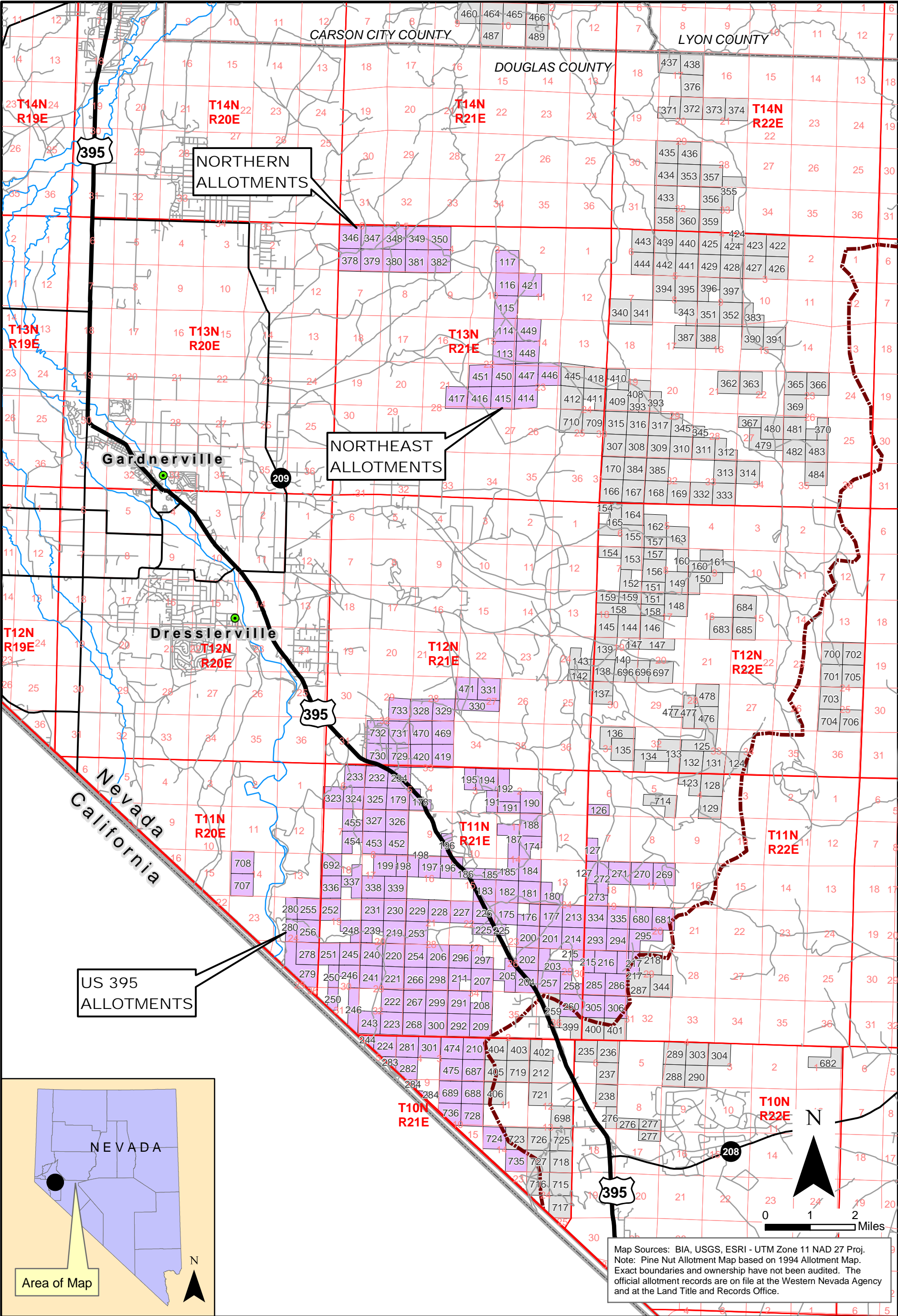


Figure 1

Study Area

Pine Nut Allotments, Douglas County, Nevada

Map Prepared by Cascade Design Professionals, Inc., Jan. 2009

Legend

- Carson River Watershed Boundary
- Allotment Included in Master Land Use Plan
- Allotment Not Included in Master Plan
- Local Road
- 50 Meter Contours

Land Resources

Topography

The Pine Nut Allotments comprise approximately 27,130 acres, all of which are located in Douglas County, Nevada. Minden/Gardnerville is the main urban center about 60 miles south of Reno. The area from Carson City south to the Pine Nut Mountains is known as the Carson Valley, with the Carson River running through it on a south-to-north course. The Valley extends from the Pine Nut Mountains on the east to the foothills of the Sierra Nevada Mountains on the west. US Highway 395 is the main highway connecting the Carson Valley to points north and south.



The Sierra Nevada Mountains reach 11,000 feet above mean sea level, and peaks in the Pine Nut Mountains reach 9,000 feet. The elevation of the valley ranges from 4,600 feet, where the Carson River flows out of the area, to 5,000 feet above sea level.

The Northern Allotments are located in an area of flat to rolling terrain. Elevations in the area are less than 5800 feet. The US 395 Allotments are in the Pine Nut Mountain Range which is very rugged, and elevations exceed 8000 feet in many areas. US 395 climbs to approximately 6,000 feet within this highway corridor. Many of these allotments are in areas of steep slopes, and many do not have access or are too far from the highway to be of interest to developers.

Geology/Soils

The Carson Valley was formed by volcanic, tectonic and erosional events during the past 240 million years. The oldest geologic units in the Carson Valley are 138 to 240 million year old volcanic and sedimentary rocks deposited in the Jurassic and Triassic Periods. During the Cretaceous Period (63 to 138 million years ago), granitic magma of the Sierra Nevada batholith intruded into the Jurassic and Triassic sedimentary rocks, forming the basement rock of the Carson Valley and a majority of the Pine Nut and Sierra Nevada Mountains. A long period of erosion followed the intrusion, until approximately 10 million years ago when basin and range faulting created present day topography by dropping the valley floor and uplifting the Sierra Nevada and Pine Nut Mountains. Erosion of the newly-formed highlands resulted in deposition of Tertiary Sediments, consisting of 40 to 80 foot thick clay beds with 10 to 20 foot thick sand and gravel interbeds over most of the valley floor. Continued faulting between 15 and 5 million years ago tilted the Tertiary sediments towards the west, and Tertiary Andesites and Basalts erupted along the southern and western sides of the valley. During the last 2 million years, continued erosion of highlands filled the Carson Valley, covering the Tertiary Sediments with Quaternary Alluvium. The combined thickness of basin fill in the Carson Valley (i.e., Tertiary Sediments and Quaternary Alluvium) ranges from 5,000 feet to 2,000 feet on the west and east sides of the valley, respectively.

The northern and northeast Pine Nut Allotments are underlain by Tertiary Sediments (Ts) and Quaternary Alluvium (Qal, QToa). Driller's logs from wells drilled near the northern Pine Nut

Allotments indicate that the Tertiary Sediments are relatively thick (up to 705 feet) and the Quaternary Alluvium is thin, ranging from 20 to 68 feet.

The US 395 Pine Nut Allotments west of the highway are underlain primarily by Tertiary Basalts. Allotments east of US 395 are underlain primarily by Jurassic sedimentary rocks. Minor amounts of Quaternary Alluvium have been identified along US 395. The mountains east and west of US 395 are composed of Tertiary Basalts and Jurassic sedimentary rocks. The Quaternary Alluvium is a valley fill deposit, and therefore, exhibits a wide range of thicknesses (from 98 feet to 780 feet). Driller's logs from wells drilled near the northern Pine Nut Allotments indicate that the Jurassic sedimentary rocks and Tertiary Basalts are relatively thick.

The BIA and the USDA Natural Resources Conservation Service recently completed a soils study for an area of the Pine Nut Mountains that included the study area for the Pine Nut Allotments. This data was utilized to analyze development suitability for those 80 allotments that were determined to have development capability in the Land Use Suitability Analysis report. Appendix A of that report contains the detailed soils suitability analysis. Overall, this data showed that the soil suitability for construction of buildings and for subsurface sewage disposal or construction of sewage lagoons is generally poor on these allotments. Not one allotment had an overall rating of "good" for either category of sewage disposal. These suitability categories are primary concerns to a developer in rural areas as poor soils increases construction costs, particularly when rock excavation is required and when sewage treatment plants are necessary.

Existing Land Use

Existing land use is primarily public and private forest and range lands. What development exists is concentrated along Pine Nut Creek and the US 395 corridor.

The vast majority of the Pine Nut Allotments are undeveloped. What housing exists is scattered along the US 395 corridor. The only residential development is Pine View Estates, which is located adjacent to US 395 approximately 7 miles southeast of Gardnerville at Cedar Flat. The development includes approximately 200 single-family homes.



Pine View Estates

Commercial development occurs mainly along US 395 in the communities of Minden, Gardnerville and Dresslerville. The Holbrook Junction area offers the only commercial facilities along Hwy 395 through the Pine Nut Mountains, along with the lodge and other services at Topaz Lake.

Some of the Pine Nut Allotments are under commercial leases for livestock grazing purposes. In the upper elevations, allotment owners also harvest pine nuts commercially. Also, the use of off-road vehicles for recreation is popular in this area. Because very few of the Pine Nut Allotments are fenced or have been surveyed, trespass is an ongoing problem, especially with those with off-

road vehicles and with some pine nut harvesters. The general public does not always know where the boundaries are for public land, Indian lands, and other private lands.

Water Resources

The most significant surface water feature in the Carson Valley is the Carson River, which flows northward through the central part of the valley. The Carson River drains several ephemeral drainages originating in the Sierra Nevada and Pine Nut Mountains, and is a major source of irrigation water.

Groundwater in the Carson Valley flows from the margins of the valley towards the Carson River in the center of the valley, and then northward along the Carson River. The US Geological Survey identifies three water-bearing units in the Carson Valley:

- Unconsolidated Alluvium – Primary aquifer in the Carson Valley, with a groundwater yield sufficiently high to support irrigation, municipal and domestic demands; depth to groundwater ranges from 5 feet below ground surface near the Carson River to greater than 100 feet at the margins of the valley.
- Tertiary Sediments – Include clays with interbedded discontinuous sand and gravel lenses; supplies water primarily for domestic purposes.
- Bedrock – Fractured zones in the volcanic and sedimentary rock supply water primarily for domestic purposes.

Water resources investigations show that aquifers exist at various elevations in the area of the north allotments and northeast allotments. The shallow aquifer supplies most of the development in that area. However, this aquifer appears not to be fully recharging, and as a result, long-term supply will probably need to come from a deeper aquifer. Well yields also vary in the area.

Groundwater is available in the southern area (southeast of Minden/Gardnerville urban area along the US 395 corridor), but primarily to the west of the highway in basalt deposits. Aquifers occur at various elevations, some of which are as deep as 1600 feet.

Groundwater quality results from a single well located near the northern Pine Nut Allotments indicate that groundwater chemistry in the well meets drinking water standards established by the Environmental Protection Agency (EPA) [i.e., Maximum Contaminant Levels (MCLs) and Secondary Standards]. Because the groundwater quality results in the northern Pine Nut Allotments are from a single well, definitive conclusions about groundwater quality cannot be made.

Groundwater quality results from other parts of the Carson Valley (e.g., near the southern Pine Nut Allotments) indicate that arsenic, sulfate, manganese and dissolved iron exceed either EPA MCLs or Secondary Standards; therefore, groundwater quality in the vicinity of the northern Pine Nut Allotments should be tested, and possibly treated, prior to groundwater development.

Groundwater quality results from five wells in the vicinity of the southern Pine Nut Allotments indicate that three of the five groundwater quality results are from groundwater samples collected at wells on the southern Pine Nut Allotments (i.e., Buffalo Run, Buffalo Run#1, and Pinion Point). The groundwater chemistry results indicate that:

- Nitrates were detected in four of five groundwater samples collected in the vicinity of the southern Pine Nut Allotments. Nitrates in groundwater are commonly due to septic effluent and fertilizers (e.g., Kehew, et al., 2001). Nitrate concentrations are below Environmental Protection Agency (EPA) Maximum Contaminant Levels (MCLs) for drinking water, which are legally enforceable drinking water standards for public water supply systems.
- Arsenic was detected in four of five Carson Valley groundwater samples collected in the vicinity of the southern Pine Nut Allotments. In one groundwater sample (Pinion Point), located on the southern Pine Nut Allotments, the arsenic concentration exceeded EPA MCLs.
- Sulfate, dissolved iron, and manganese exceeded EPA National Secondary Drinking Water Standards (EPA, 2003) at one or more sample locations. EPA secondary standards are guidelines for contaminants that, when exceeded, may cause deleterious cosmetic effects (e.g., skin or tooth discoloration).

Groundwater chemistry results in the vicinity of the southern Pine Nut Allotments do not prohibit development of the groundwater resource. However, treatment may be required prior to use of groundwater for potable water use.

Climate

The cold high desert climate of the region is characterized by moderately cold winters and moderate summers. Temperatures range from an average minimum temperature of 22 degrees F. in the winter to an average maximum temperature near 90 degrees F. in summer. Average annual precipitation is 9.4 to 11.8 inches in Carson City and 8.3 inches in Minden. Annual average snowfall is 19.4 to 22.2 inches in Carson City and 18.3 inches in Minden.

Air Quality

Douglas County and therefore the plan area are in an attainment area, i.e. in attainment with EPA pollutant concentrations for lead, ozone, sulfur dioxide, oxides of nitrogen, carbon monoxide, and PM₁₀ established by the EPA and adopted by the State of Nevada. Air quality data for some pollutants are obtained at two monitoring sites, one in Carson City (carbon monoxide and particulate matter) and one in Gardnerville (particulate matter).

Natural Resources

Wildlife

Common wildlife species in the area include Jackrabbits (*Lepus* sp.), coyote (*Canis Latrans*), mule deer (*Odocoileus hemionus*), Black Bear (*Ursidae* sp.), mountain lion (*Feix concolor*), skunks (*Mephitis, mephitis* and/or *Spilogale putorius*), red-tailed hawk (*Buteo jamaicensis*) and a variety of rodents and non-game birds. The project area is part of the mule deer habitat which ranges throughout the Pine Nut and Carson Ranges. The US 395 corridor allotment area is also in the migration route for the mule deer population as they move seasonally from the Sierra Mountains to the Pine Nut mountains.

Threatened and Endangered Species

The U.S. Fish and Wildlife Service and the Nevada Department of Wildlife list 37 threatened or endangered species (28 animals and 9 plants) in Nevada, 5 of which (3 animals and 2 plants) are listed for Douglas County. These are:

- Threatened species: Bald eagle (proposed for delisting); Lahontan cutthroat trout
- Candidate species: Mountain yellow-legged frog; Webber's ivesia; and Tahoe yellowcress

In addition, the Carson wandering skipper is an endangered species found in the Carson City rural area.

Vegetation

Vegetation varies widely throughout the Pine Nut Allotments and surrounding area. Major vegetation types include:

- Pinon Pine
- Juniper
- Mountain Mahogany
- Big Sage
- Mormon Tea
- Rabbit Brush
- Bitter Brush
- Other Minor Species (sagebrush, cheat grass, blue grass, greasewood)

Higher elevations are predominantly forested with Pinon Pine and Juniper, and the lower lying areas are predominantly sagebrush and cheat grass.

Cultural Resources

The cultural resources of the Pine Nut Allotments have not yet been surveyed and mapped. The BIA reports that the area is rich in archaeological and cultural resources. As a result, for any

proposed lease, an archaeological survey will be required along with any appropriate mitigation measures.

Socioeconomic Conditions

Population

Population in the three parts of Western Nevada that comprise the planning region is shown in Table 1.

Table 1 Population Growth in Western Nevada, 1980 - 2006					
	1980	1990	2000	2006	%Δ 1980-2006
Douglas County	19,921	27,637	41,259	45,909	130.5%
Carson City	32,022	40,443	52,457	55,289	72.7%
Washoe County	193,623	254,667	339,486	396,428	104.7%
Total	311,043	324,737	435,202	499,632	60.6%

Source: US Census Bureau, Decennial Census Counts and Estimated Count for 2006

The 2006 U.S. Census data shows that of the three areas, Douglas County has been experiencing the highest growth rates, with an increase of 130.5% from April 1, 1980 to July 1, 2006. Carson City grew by a little over one-half that rate, at 72.7%, while Washoe County increased by 104.7%.

In numerical terms, Douglas County population grew from 19,920 to 45,909, an increase of 25,988 people; Carson City grew from 32,022 to 55,289, an increase of 23,267 people, nearly the same amount as Douglas County. However, Washoe County population grew from 193,623 to 396,428, an increase of 202,808 people, or almost 8 times the growth in Douglas County.

Economy

Data published by the Nevada Department of Employment, Training, and Rehabilitation indicate that the leisure and hospitality industry, primarily gaming, is the largest employer in Douglas County. Most of this sector is located at Lake Tahoe rather than in the valley; however, the valley is reported to be a major residential location for gaming-industry workers because of the lack of available housing and the high prices of land and houses at the lake. Several of the casinos have their own shuttles that pick up employees in the valley and take them to work at their facilities at the lake. For that reason, the gaming industry at Lake Tahoe and other areas in the region add to the demand for residential housing in the Carson Valley.

Trade, transportation and utilities sector, the second largest employer, is growing, gaining 11.7% employment from 2003 to the 1st Quarter of 2007. In part, this reflects the growth of the retail trade industry in response to the increased population in the county.

Manufacturing appears to be relatively healthy, with an increase in employment of 6.8% between 2003 and the 1st Quarter of 2007. However, the Carson Valley has relatively few manufacturing employers and the number of workers reflects only about 8.4% of all employment, compared to a national average of about 9.8%. Diversifying the economic base and recruiting more higher wage manufacturing industries is a goal of regional economic development efforts.

The professional and business services sector has also shown strong growth, increasing by 24.1% over the period. This is the fastest-growing sector in the U.S. economy and the data show that Douglas County is participating in that growth.

Education and health services showed the strongest growth, increasing by 43.3%. This sector also pays the highest annual mean wage in Douglas County at \$42,853 according to the latest data available. It represented 5.4% of total employment in the county in the 1st Quarter of 2007.

Transportation

US Highway 395 is the major north-south link to urban centers to the north, traversing the southern portion of the allotments north to Gardnerville, Minden, Carson City, and Reno. State Route 3 joins US Highway 395 at Holbrook Junction. Other access to the allotments is provided by Leviathan Mine Road which extends west from US 395 into the southwestern portion of the allotments; Pine Nut Road which extends east from US 395 just north of Dresslerville into the central portion of the allotments; and the “Sunrise Route” which extends east from the highway just north of the Douglas-Tahoe Airport into the northern portion of the allotments. Most of the other roads in the area are unimproved dirt roads or trails suitable for trucks and/or four-wheel-drive vehicles only.

Bus and truck (shipping) service is provided along US 395. Rail and major air service are available at Reno, 50 miles north of the allotments. Local flights are available at the Carson Municipal Airport, about 20 miles north of the allotments and the Douglas-Tahoe Airport, just north of Minden provides service for private flights only.

Utilities and Community Services

Elementary students attend various Carson Valley schools, and all middle and high school students attend Carson Valley Middle School and Douglas High School, respectively.

In the US 395 area, power and communications facilities are in place along US 395. With the exception of the community water system, the sewage collection system, and treatment plant serving the Pine View Estates, there are currently no community water or sewer systems in the planning area. Sewage disposal is provided by individual sewage, on-site disposal systems. Domestic water is provided by individual wells.

Solid waste collection and disposal services are provided by Douglas Disposal, Inc., which owns and operates a transfer station west of Highway 395, south of Gardnerville, and south of Pinenut Road. Waste is received at the station either by collection trucks or by local residents and then transported to the Lockwood Landfill in Storey County, which is owned and operated by Reno Refuse, Inc. Currently there are no operating landfills in Douglas County.

Fire protection and emergency services are provided by the East Fork Fire and Paramedic District. The District is one of three fire protection districts in Douglas County and serves approximately 600 square miles. The district supports 13 fire stations, 8 of which are all volunteer. The District provides structural firefighting, emergency medical services, wildland firefighting and operations-based hazardous materials response.

SUMMARY OF HIGHEST AND BEST USE DESIGNATIONS

The Douglas County Land Use and Transportation Plan shows that virtually all of the allotments are located on land classified as forest and range land. This land is owned by the U.S. Government under the jurisdiction of several federal agencies, primarily BIA, BLM, and USDA. It can be observed that none of the allotments directly border areas of urbanization.

In general, the allotments are separated from the urban zoning areas by land that is designated as forest or range land. The zoning map shows that the northern allotments are relatively close to urban development but would still not be classified as “in the path of development”.

Some of the southern Hwy 395 allotments are close or adjacent to areas zoned for residential and limited commercial uses in the vicinity of Holbrook Junction.

Based on the data provided above, it is found that the allotment areas are subject to overall growth influences in Douglas County but do not have specific influences affecting their short-term or near-term development potentials. Development of individual allotments will be in response to opportunities as they arise but cannot be predicted in advance based on development patterns and trends.

Highest and best use land use designations assigned to each area are summarized as follow:

Northern and Northeast Allotments

The two blocks of allotments that comprise the northern allotments area appear to offer the best opportunities for larger scale development, such as residential subdivisions or self-contained communities such as a retirement center, or resort. The allotments are also suitable for multiple lots, but economies of scale in developing infrastructure would support higher densities.

US 395 Allotments

Northwest Transition Area between Pine Nut Mountains and Carson Valley

In this part of the US 395 allotments, several allotments are suitable for single-family residential development or small subdivisions on the flatter parcels for family housing to support workers commuting to jobs in Gardnerville or Minden. Lot sizes are generally in the one-acre to two-acre size range. This area would also support “ranchets” or dude ranches.

Topaz Lake – Holbrook Junction Area

Some of the allotments at the southern end of the Pine Nut Mountains could be developed for horse ranches or other “lifestyle” homesites similar to existing subdivisions. Lot sizes would be in the two-acre to five-acre range. The market is currently soft but the area is expected to grow.

Central Hwy. 395 Allotments

Flatter allotment areas close to Hwy. 395 are suitable for single-family residential development for families that want relative isolation and a rural lifestyle. Commuting is difficult during the winter months, so the area is not suited for family-oriented subdivisions. Lots would be generally in the two-acre size range. Allotments with frontage on Hwy. would also be suitable for light industrial and small commercial developments (mini storage as example).

Allotments East and West of Hwy 395

Beyond the flatter areas, there is essentially no development potential. These areas should be retained for cultural, recreational, or resource uses.

IMPACT ANALYSIS

This impact analysis is based on the results of the Land Use Suitability Analysis and is focused on a maximum development scenario from the Highest and Best Use Land Use Designation report. The main objective of the Land Use Suitability Analysis was to determine which allotments would be suitable for development as well as being attractive to a land developer. This analysis showed that 80 allotments were suitable for development with 58 rated as good suitability, 7 rated as fair, and 15 were rated as marginal. (See Figure 2.) Of the 80 allotments, 26 are located in the North and Northeast allotment areas. The remaining 54 allotments are along the US 395 corridor. In total, these 80 allotments include 12,451 acres of land. This impact analysis is directed to these 80 allotments.

It should be noted that there is no specific proposed project to evaluate. As a result, a detailed impact analysis is not possible. This analysis utilizes assumptions and can only identify general impacts and areas of potential concern. Environmental Assessments that will be required and

conducted at part of the leasing process will identify specific impacts and propose appropriate mitigation measures.

Methodology

In the Land Use Suitability Analysis, various land uses were assessed, including residential, commercial, light industrial, and recreational developments. Of these uses, the “Highest and Best Use” as assessed in the Use Designation report, showed that from a market perspective that rural housing development was overwhelmingly the likely use. At this level of analysis, it is extremely difficult to predict industrial, commercial, or recreational markets for these rural areas. These uses also would not be the prevailing uses.

Overall, in terms of impacts, predominately residential development will likely have the highest impact on land use and demands on infrastructure and public services. As a result, the following methodology was utilized to assess potential impacts based on a maximum residential development scenario.

In order to assess impacts the following methodology was utilized which is predicated on three basic steps in order to determine:

- The amount of net developable acreage
- The number of dwelling units that could be constructed
- The resulting population increase

Determining the amount of net buildable land involved several steps. The first involved reducing the gross acreage by the amount of a 100-foot buffer on the outer edge of each allotment in order to minimize impacts to adjacent allotments. The second step, based on looking at aerial photographs, was to estimate the percentage of developable land base on topography. Steep slopes over 20% are considered non-buildable. The remaining acreage was further reduced by 21% to account for roads and other infrastructure needs. The result is net acreage to support housing.

Based on the findings from the Land Use Suitability Analysis, the highest suitable density was assigned to determine the maximum number of dwelling units. High density was calculated at an average of half-acre lots, medium density at 2-acre lots, and low density at 5-acre lots.

To determine population impacts, the average household size for Douglas County (2.5 persons) was multiplied by the number of housing units. Table 2 below summarizes the development and resulting population data. Figure 2 shows the development potential of each allotment.

Overall, when taking into account the buffer area, unsuitable topography, and infrastructure needs, net acreage was approximately half of the gross acreage. Of 12,451 gross acres, there are approximately 6,148 net acres. This would support approximately 5,400 dwelling units and a resulting population in the order of 13,500, if fully developed for residential uses. (See Table 4 at the end of this report for a detailed breakdown dwelling units and population by allotment.)

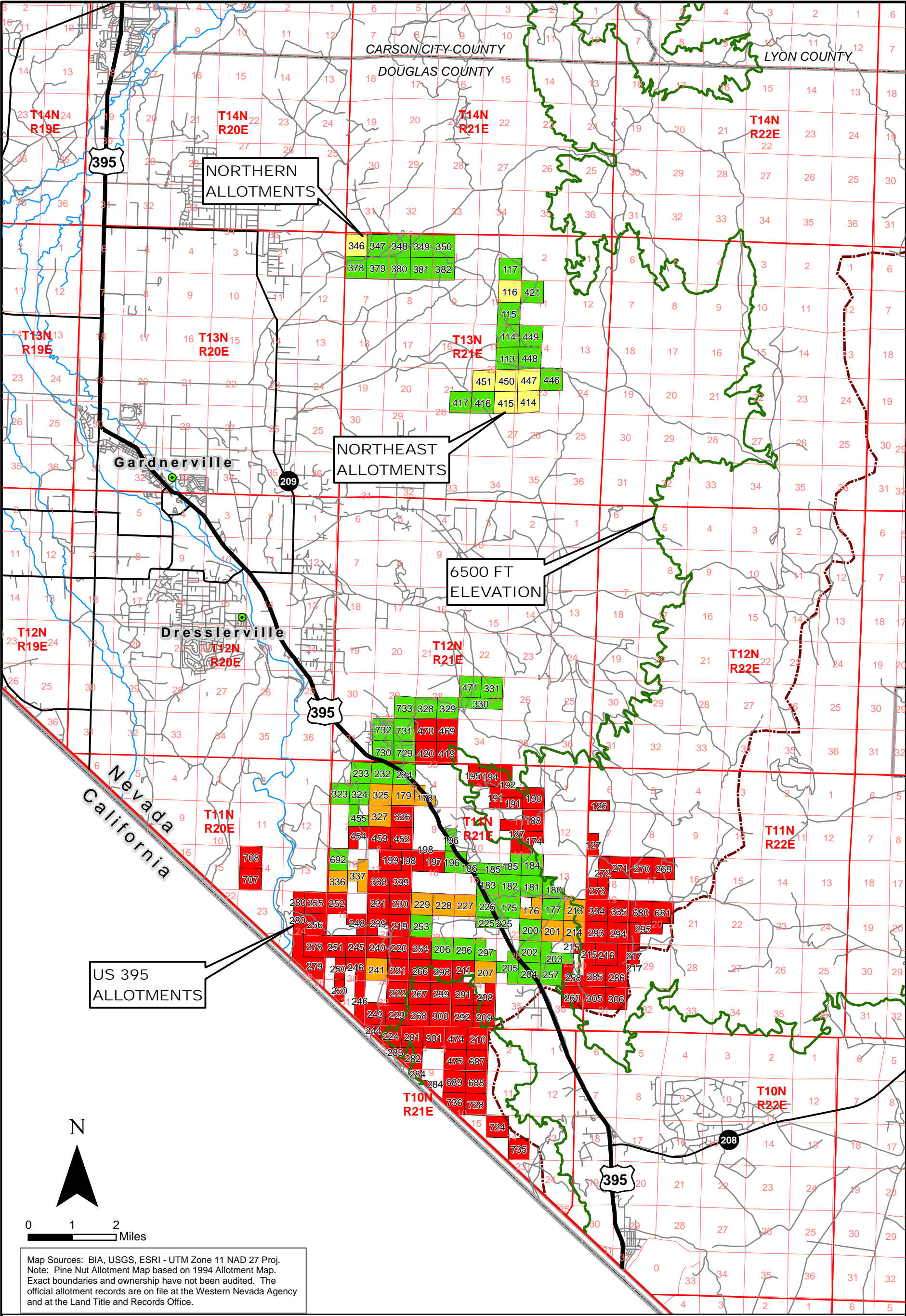


Figure 2

Development Suitability

Pine Nut Allotments, Douglas County, Nevada

Map Prepared by Cascade Design Professionals, Inc., Jan. 2009

Legend

- 6500 Ft. El.

Local Road

Carson River Watershed Boundary

50 Meter Contours
- Development Suitability*

Good

Fair

Marginal

Not Developable

Table 2
Developable Area, Housing Units, & Population

Area	No. of Allotments	Gross Acres	Net Acres	Dwelling Units	Population
North	10	1582	1044	1469	3673
Northeast	16	2560	1707	1962	4905
US 395 Corridor	54	8309	3397	1976	4940
Total	80	12451	6148	5407	13518

Land Resources

Topography

Minor modifications of the topography will occur as a result of regrading for roads and driveways, parking areas, building pads, septic tank and drainfields or other wastewater treatment facilities, and water storage reservoirs. It is estimated that approximately 2900 acres would be disturbed and re-graded for the construction of roads, housing, septic tanks and drainfields, and other types of public facilities.

Mitigation is required to prevent erosion and sedimentation.

Soils

Minor disturbances to native soils will occur as a result of regrading for roads and driveways, parking areas, building pads, wastewater treatment facilities, septic tanks and drainfields, and water storage reservoirs. It is estimated that approximately 2,900 acres would be disturbed. Some soils may be removed and some minor amounts may be imported for septic drain fields or wastewater lagoons.

Mitigation is required.

Water Resources

Any type of development will need to rely on groundwater sources for potable water and to provide water for fire flows. It is expected that groundwater resources would be impacted by additional development. In the area of the North and Northeast Allotments, groundwater for rural residential development is generally being supplied by shallow aquifers that are not being recharged. Additional development will most likely require tapping and potentially depleting deeper aquifers. Long-term sustainability may not be possible.

In the US 395 corridor, aquifers vary in depth and in size. Aquifer recharge is also an issue in this area as well and long-term sustainability is also unknown. As a result, of the uncertainty of long-term sustainability of groundwater sources, the BIA Master Lease will require that this issue be disclosed in all sub-lease agreements.

As shown in Table 3, average daily water consumption for all three allotment areas would be in excess of 12 million gallons per day. On an annual basis, this would amount to more than 2,400 acre-feet of groundwater consumption.

Table 3 Daily Groundwater Consumption Estimates					
Area	Projected Number of Dwelling Units	Average Gallons per Day per Dwelling Unit	Total Gallons per Day	Cubic Feet per Day	Acre-feet per Day
North	1469	400	587,600		
Northeast	1962	400	784,800		
US 395 Corridor	1976	400	790,400		
Total			12,162,800	289,123	6.64

Climate

This study did not find any significant impacts on the climate. Although additional traffic may increase carbon dioxide levels in the air, adding to greenhouse gases, the overall impact should be negligible.

No mitigation is required.

Air Quality

During clearing and grubbing for any development, particulates in the form of dust will be generated. This will be for a short period of time and will require mitigation

The use of wood stoves in homes and other building can also create air quality problems. Mitigation will be required.

Should some type of industrial or commercial use be proposed that produces airborne emissions, the Environmental Assessment required for that development application will be required to identify appropriate mitigation measures necessary to meet federal air quality standards.

Increased development and population growth will generate more traffic that will result in additional pollution. However, this will occur within the region no matter where additional development is located. The amount of pollution is not expected to be significant. No mitigation is required.

Natural Resources

Wildlife

In general, the overall density of development will be low enough not to significantly impact wildlife migration routes, particularly the mule deer. There will be sufficient space available for migratory or feeding patterns to shift in order to avoid development areas. Much of the wildlife habitat is found above elevations where development should occur, or in terrain unsuitable for development.

Threatened or Endangered Species

The Bald eagle and the Lahontan cutthroat trout threatened species found in Douglas County. The Lahontan cutthroat trout will not be impacted as there are no year-round flowing streams or rivers on the allotments. Development in the North and Northeast Allotments should not impact the Bald eagle as there is minimal nesting or habitat area in these locations. Development along US 395 will have some impact, but it should be minimal as the better nesting areas are in higher elevations where there is more forest vegetation and there is little potential for development.

As species mapping was not included in this study, any specific potential impact to three candidate species found in Douglas County is unknown. These are the Mountain yellow-legged frog, Webber's ivesia, and Tahoe Yellowcress.

Impacts to these species will be required to be documented in any individual development's environmental assessment process, and mitigation may be required.

Vegetation and Habitat

It is estimated that approximately 2,900 acres (Table 4) of vegetation and habitat area will be disturbed as a short-term impact resulting from construction activities. Most of this land would be classified as rangeland. Over the long term, it is estimated that approximately a third of these acres will be re-seeded or replanted as part of landscaping on the part of homeowners, so the overall loss of vegetation and habitat will be approximately 2,000 acres. This amounts to 16% of the total acreage of the 80 allotments that were determined to be developable or about 9% of the total acreage of all 176 allotments included in the overall study. Although this is a significant amount of acreage, this type of vegetation and habitat loss will result anywhere in Douglas County where urbanization or rural residential development occurs. Mitigation will be required.

Invasive cheat grass infestations may be negatively impacted by development, which is a positive outcome for the overall health of the local vegetation.

Pine nut harvesting is generally done above elevations suitable for development, thus there will be little to no negative impact to Pinon pine areas.

Cultural Resources

Because the area is known to be rich in artifacts, it is anticipated that various cultural resources will be found. The extent and locations are unknown and will not be known until cultural resource surveys are undertaken as part of the environmental assessment process that will be required for any development requiring a lease.

Cultural resources are highly sensitive and would be impacted negatively by any development, and if found, mitigation measures will be required.

Land Use

It is estimated that approximately 2,900 acres of rangeland would be converted to rural residential use. This will certainly change the character of the North and Northeast Allotments which is currently undeveloped. Likewise, along the US 395 corridor, rural residential development will change the natural character of most of this area. Additional residential use will impact traffic, public services, and other areas as noted in other sections of this document.

Housing developments adjacent to grazing lands may not be the most compatible of uses, particularly in open range areas and may restrict livestock management activities.

As with any developing residential areas, small commercial nodes may develop. These could be neighborhood or highway related retail and service activities. This type of development is likely to be minimal.

Quarry rock may be available as an economic resource in some areas. If any mining and extraction, activities are proposed, the environmental assessments due at the time of development will clarify potential impacts and propose appropriate mitigation measures.

Many allotments may be suitable for recreational uses. Dude ranches, guided backpacking and horse camping, and other outdoor recreational uses are possibilities.

Socioeconomic Conditions

Population for Douglas County is estimated at 54,000 for the year 2007. The planning population projected for the year 2030 is 83,500. This is approximately a 2% growth rate per year and is largely based on the limitation placed on the number of building permits that the County will issue annually. This forecast represents an increase of 29,500 people.

Based on the number of residential units that could be placed on developable allotments, it is estimated that the resulting population would be approximately 13,500 people, which would be 46% of the projected county growth and would represent 25% of the overall county projected population for 2030.

Demographic trends in Douglas County are expected to remain fairly constant as the area is likely to remain attractive as a retirement area. No mitigation is proposed for population growth.

Impacts to the local economy are difficult to predict, but should be positive. Jobs will be created during construction and allotment owners will receive income from their land. In addition, new residents will utilize existing businesses in the Mindon/Gardnerville urban area and Topaz for goods and services. No mitigation is proposed for employment and income.

Transportation

Traffic impacts are likely to be fairly major. Trips generated per dwelling unit can vary depending on a number of variables, including household size, age of the occupants, and household income. In general, the more people living in the dwelling unit the more trips are generated. Also, higher income households generate more trips than lower income households. Age is also important in that elderly and retired people do not generate as many trips as there are no work or school destination trips and household size is generally smaller.

Overall, a general rule of thumb is that each single family dwelling unit will generate approximately 10 trips per day. (Each trip has an origin and a destination, so a trip to the store and back counts as two trips—home to store and store to home.) However, because of the demographics of Douglas County, an assumption of 8 trips per day is assumed for each dwelling unit. This is based on census data that shows that the number of persons per dwelling unit in the county is only 2.5, which is a relatively low average. This is likely the result of the fact that Douglas County has been an attractive area for retirees over the past decade; and therefore, the average family size is lower. Since it is anticipated this trend will continue, a lower trip generation rate was applied, which also accounts for internal trips that do not reach the highway or other major roads.

Even at 8 trips per dwelling unit, the number of trips generated is significant. The north allotments could generate as many as 11,800 new trips, the northeast allotments approximately 15,700 trips, and the US 395 corridor approximately 15,800 trips. These volumes will have a noticeable impact on the road system as congestion increases. A measure of congestion is Level of Service which Ranges from A to F. The 2000 Highway Capacity Manual defines these for roadways as:

- A Free flow
- B Free flow, presence of other vehicles is noticeable
- C Ability to maneuver and select operating speed is affected
- D Unstable flow, speeds and ability to maneuver are restricted
- E At or near capacity, flow is quite unstable
- F Forced flow, breakdown (commonly called gridlock)

Level of Service is also applied to signalized and unsignalized intersections. Again, these levels go from little or no delay to gridlock with long delays. Generally, it is desirable to plan for C levels or better, but it is not uncommon for communities to have to settle for D or sometimes E Levels of Service because of physical constraints or cost constraints.

For the north allotments, most of the generated traffic will likely impact Johnson Lane. Current traffic counts on Johnson Lane at US 395 and east of Vicky Lane are 10,300 and 4,700, respectively. Johnson Lane is designated as a collector road in the County's 2007 Transportation Plan. It is currently a 2-lane road operating at a B Level of Service at US 395 and at an A level east of Vicky Lane. Potential traffic generated from the allotments would degrade the level of service to a D level with an F level at US 395. The County plan, however, shows Johnson Lane being upgraded to a 4-lane collector. As a result, the additional trips generated would only degrade the level of service to a B level at US 395. However, this does not take into account other additional development in that area. Most likely, levels of service will be degraded to C and D levels over the long term.

Access to the northeast allotments is less defined, so increased traffic impacts are difficult to predict. Johnson Lane will probably be impacted by the northern most allotments in the group which will contribute to further degrading of service levels on this collector. Impacts to roads to the west and southwest will not be known until the road system in this area becomes more defined. To some degree, traffic will likely disperse to different collector roads.

Along the US 395 corridor, almost all of the traffic generated by any new development will find its way to US 395 south of Dresslerville. The only exceptions are a few allotments on the north border (northeast of US 395) that will likely be accessed by other roads coming out of the Dresslerville area. The addition of 15,000 plus trips on US 395 between Dresslerville and Topaz Lake will have a major impact as most of these trips will be northbound as opposed to southbound. The Nevada Department of Transportation reports that in 2007 the Average Annual Daily Traffic on US 392 at Dresslerville (Palomino Drive) was 9,000. North of the SR 208 (north of Topaz Lake), the count was 6,700. It is assumed that the average of these two counts, of approximately 7,850 trips could be applied to the corridor running through the US 395 allotments. The addition of 14,000-15,000 additional trips per day would degrade the level of service from the current A level to a D level.

Utilities and Community Services

Public Water and Sewerage Systems

There will be no impact to existing public water and sewerage systems as none are anticipated to be extended to serve the allotments. No mitigation is required.

Solid Waste Collection

The potential for 5,400 additional dwelling units will produce a significant amount of solid waste. However, any population growth in the County will produce similar impacts no matter where it is located. Provisions for the collection and disposal of solid waste will be a requirement of any lease.

Power

The extension of electrical service is not anticipated to be a problem and would have little environmental impact. No mitigation is required.

Communications

The extension of telephone service is not anticipated to be a problem and would have little environmental impact. No mitigation is required.

Emergency Services

The potential addition of 13,000 people will have a major impact on law enforcement, fire, and emergency medical services. On trust lands, the BIA has responsibility for law enforcement and fire suppression. However, the BIA Western Nevada Agency does not have the capacity to provide adequate law enforcement (24 hours a day; 7 days a week) and cannot provide immediate response to structure fires. BIA is not responsible for providing emergency medical services. Mitigation measures to ensure provision of these services will be required

Schools

Population growth anywhere in the county will impact the Carson Valley School District. These impacts are usually mitigated to some degree by increases in taxes that result from new development and population. Since trust lands are not subject to real property taxation, funding for schools has come via personal property tax. It is reported that the school district is not pleased with this arrangement, and additional mitigation may be required.

MITIGATION MEASURES

Mitigation measures are discussed in the following for those areas where mitigation is required.

Land Resources

Topography

Where major excavations are required for roads and homesites, finish grading will be required to reduce the potential for erosion. Requirements will be include in the Development Standards.

Soils

Where excavation occurs, top soil will need to be stored and then replaced on completion of construction.

Water Resources

Because of the uncertainty of groundwater supply in the future, wells will be required to be tested every 3 years (or more often if need be) for yield, drawdown, and depth to static water level in order to ensure adequate supply, particularly for fire protection. In addition, water shall be tested annually for quality to ensure public safety. Groundwater can then be monitored, and appropriate measures can be taken if supply or water quality problems are documented. Test results are to be submitted to the Superintendent of the BIA Western Nevada Agency.

Air Quality

Clearing and grubbing activities during dry weather will generate dust. Regular watering of exposed soil will be required. Any areas disturbed that are not developed within 30 days will require the application of an approved dust palliative. Areas not developed within a 90 day period will require reseeding with an approved seeding mix of native plants. On completion of improvements, landscaping and or replanting and reseeding of native plants will be required as specified in the Development Standards.

If wood stoves are installed in homes or other building; they must be EPA approved in order to reduce emissions.

Should some type of industrial or commercial use be proposed that produces airborne emissions, the Environmental Assessment prepared for that development application will be required to propose appropriate mitigation measures in order to meet applicable air quality standards.

Natural Resources

Wildlife

There will be temporary loss of habitat during construction and permanent loss of habitat where permanent development occurs. If grubbing and grading is conducted during breeding or nesting seasons, a qualified biologist will be required to survey the area prior to clearing and grubbing. Nesting areas will be delineated, and a buffer area will be established, so the area can be avoided.

Threatened and Endangered Species

If any threatened or endangered species are found to be impacted, mitigations will be required. Mitigation measures will be proposed in the environmental assessment required for each lease.

Vegetation

There will be both temporary and permanent loss of vegetation. After improvements are completed, disturbed pervious areas will be reseeded with an approved seed mixture of native plants. Landscaping will also help lessen any impacts.

Cultural Resources

A cultural resources survey will be required as part of the environmental assessment process for each development application. If cultural resources are found, appropriate mitigation measures will be included in the Environmental Assessments.

Land Use

Since allotment owners have the right to develop their land, the conversion of natural environment to rural and urban uses will occur, although to what extent is unknown. To protect neighboring allotments, a 100-foot buffer of non-developable area will be required around the perimeter of each allotment. The Environmental Assessment process for any development will also identify any incompatible land use issues that would require mitigation.

Transportation

Traffic impacts potentially could be severe, and each development application will require a traffic study to determine appropriate mitigation measures. To access US 395 will require an encroachment permit from the Nevada Department of Transportation (NDOT). NDOT will determine which mitigation actions are warranted. These could include additional traffic lanes, turn lanes, and/or signalization. There will be a similar procedure for accessing roads owned by the county or other jurisdictions.

Many of the allotments have existing dirt roads, most unimproved, that provide access. Many allotments have no access roads. In order to ensure that development does not preclude access to a neighboring allotment, the development standards will require that access cannot be blocked or denied to neighboring or contiguous allotments.

Utilities and Community Services

Emergency Services

Since the BIA Western Nevada Agency does not have the capacity to provide adequate law enforcement and fire protection services on trust lands, provision of these services will need to be negotiated by developers to ensure that these developments will be served by existing agencies and special districts. Law enforcement will require contracting with Douglas County, and fire and emergency medical services will need to be contracted with the East Fork Fire and Paramedic District. Fire protection services are particularly important as this will affect the ability to insure developments for fire damage.

Solid Waste Collection

The provision for solid waste collection and disposal will be a requirement of any lease. This will most likely require contracting with a local collection service.

CUMULATIVE EFFECTS

Overall, based on the development scenario present, the major cumulative effect would be the change in character of the landscape in specific areas from undeveloped, unspoiled natural areas to rural and suburban densities of residential uses. Clearly the most significant changes would be the conversion of land use and the increase in traffic that it will generate. This will be particularly true in the North and Northeast Allotment areas where there is no development other than a few earth roads. These two areas include about 4,200 acres. Both areas are composed of contiguous allotments. Thus the change in land use would be very pronounced.

The US 395 corridor allotments that are developable will impact the character of the highway as most of these allotments area either adjacent to the highway or nearby. Outside of this corridor, there would be little impact.

Table 4
LAND USE ASSESSMENT MATRIX

ALLOTMENT DATA						HIGHEST & BEST USE							DEVELOPABLE AREA				HOUSING UNITS & POPULATION							DISTURB.
						Commercial Residential			Commercial Investment			Comm. Rec.												
Allotment No.	Size (acres)	Location	No. of Owners	Current Land Use	Developable (yes/no)	High Density (subdivision)	Medium Density	Low Density (rural)	Highway Retail	Neighborhood Services	Light Industrial	Destination	Size Less Buffer (acres)	% Developable	Gross area developable	Net Developble Acres	0.5 AC lot size	1.0 AC	2.0 AC lot size	5.0 AC lot size	Housing Units	Population @ 2.5 Persons/Household	Net Disturbed Area	
346	148.80	North	10	Undev.	Yes	No	No	M	No	No	No	M	128	70%	90	71	142	71	35	14	14	35	24	
347	161.30	North	10	Undev.	Yes	M	Yes	Yes	No	M	No	Yes	139	100%	139	110	219	110	55	22	55	138	46	
348	161.45	North	10	Undev.	Yes	Yes	Yes	Yes	No	M	No	Yes	139	100%	139	110	219	110	55	22	219	548	73	
349	160.93	North	10	Undev.	Yes	Yes	Yes	Yes	No	M	No	Yes	138	100%	138	109	219	109	55	22	219	548	73	
350	160.72	North	10	Undev.	Yes	M	Yes	Yes	No	M	No	Yes	138	100%	138	109	218	109	55	22	55	138	45	
378	148.80	North	24	Undev.	Yes	Yes	Yes	Yes	No	M	No	Yes	128	100%	128	101	202	101	51	20	202	505	67	
379	160.00	North	24	Undev.	Yes	Yes	Yes	Yes	No	M	No	Yes	138	100%	138	109	217	109	54	22	217	543	72	
380	160.00	North	24	Undev.	Yes	Yes	Yes	Yes	No	M	No	Yes	138	100%	138	109	217	109	54	22	217	543	72	
381	160.00	North	24	Undev.	Yes	Yes	Yes	Yes	No	M	No	Yes	138	100%	138	109	217	109	54	22	217	543	72	
382	160.00	North	15	Undev.	Yes	M	Yes	Yes	No	M	No	Yes	138	100%	138	109	217	109	54	22	54	135	45	
	1582.00	North Allotments											1361		1322	1044	2089	1044	522	209	1469	3673	590	
117	160.00	NE	13	Undev.	Yes	Yes	Yes	Yes	No	M	No	Yes	138	100%	138	109	217	109	54	22	217	543	72	
116	160.00	NE	27	Undev.	Yes	M	Yes	Yes	No	M	No	Yes	138	100%	138	109	217	109	54	22	54	135	45	
421	160.00	NE	15	Undev.	Yes	M	Yes	Yes	No	M	No	Yes	138	100%	138	109	217	109	54	22	54	135	45	
115	160.00	NE	27	Undev.	Yes	Yes	Yes	Yes	No	M	No	Yes	138	100%	138	109	217	109	54	22	217	543	72	
114	160.00	NE	27	Undev.	Yes	Yes	Yes	Yes	No	M	No	Yes	138	100%	138	109	217	109	54	22	217	543	72	
449	160.00	NE	38	Undev.	Yes	Yes	Yes	Yes	No	M	No	Yes	138	100%	138	109	217	109	54	22	217	543	72	
113	160.00	NE	27	Undev.	Yes	M	Yes	Yes	No	M	No	Yes	138	100%	138	109	217	109	54	22	54	135	45	
448	160.00	NE	38	Undev.	Yes	Yes	Yes	Yes	No	M	No	Yes	138	100%	138	109	217	109	54	22	217	543	72	
451	160.00	NE	14	Undev.	Yes	M	Yes	Yes	No	M	No	Yes	138	95%	131	103	207	103	52	21	52	130	43	
450	160.00	NE	24	Undev.	Yes	No	M	Yes	No	No	No	M	138	90%	124	98	196	98	49	20	20	50	33	
447	160.00	NE	2	Undev.	Yes	M	Yes	Yes	No	M	No	Yes	138	95%	131	103	207	103	52	21	52	130	43	
446	160.00	NE	2	Undev.	Yes	Yes	Yes	Yes	No	M	No	Yes	138	100%	138	109	217	109	54	22	217	543	72	
417	160.00	NE	26	Undev.	Yes	Yes	Yes	Yes	No	M	No	Yes	138	100%	138	109	217	109	54	22	217	543	72	
416	160.00	NE	2	Undev.	Yes	M	Yes	Yes	No	M	No	Yes	138	100%	138	109	217	109	54	22	54	135	45	
415	160.00	NE	1	Undev.	Yes	M	Yes	Yes	No	M	No	Yes	138	100%	138	109	217	109	54	22	54	135	45	
414	160.00	NE	1	Undev.	Yes	M	Yes	Yes	No	M	No	Yes	138	90%	124	98	196	98	49	20	49	123	41	
	2560.00	Northeast Allotments											2512		2160	1707	3413	1707	853	341	1962	4905	892	
471	160.00	US 395	145	Undev.	Yes	Yes	Yes	Yes	No	No	No	No	138	100%	138	109	217	109	54	22	217	543	72	
331	160.00	US 395	48	Undev.	Yes	M	M	Yes	No	No	No	No	138	80%	110	87	174	87	43	17	17	43	29	
733	160.00	US 395	35	Undev.	Yes	M	Yes	Yes	No	No	No	No	138	100%	138	109	217	109	54	22	54	135	45	
328	160.00	US 395	5	Undev.	Yes	No	No	M	No	No	No	No	138	75%	103	82	163	82	41	16	16	40	27	
329	160.00	US 395	41	Undev.	Yes	No	M	Yes	No	No	No	No	138	80%	110	87	174	87	43	17	17	43	29	
330	160.00	US 395	46	Undev.	Yes	No	M	M	No	No	No	No	138	90%	124	98	196	98	49	20	20	50	31	

Table 4
LAND USE ASSESSMENT MATRIX

ALLOTMENT DATA						HIGHEST & BEST USE							DEVELOPABLE AREA				HOUSING UNITS & POPULATION							DISTURB.
						Commercial Residential			Commercial Investment			Comm. Rec.											AREA	
Allotment No.	Size (acres)	Location	No. of Owners	Current Land Use	Developable (yes/no)	High Density (subdivision)	Medium Density	Low Density (rural)	Highway Retail	Neighborhood Services	Light Industrial	Destination	Size Less Buffer (acres)	% Developable	Gross area developable	Net Developble Acres	0.5 AC lot size	1.0 AC	2.0 AC lot size	5.0 AC lot size	Housing Units	Population @ 2.5 Persons/Household	Net Disturbed Area	
732	160.00	US 395	4	Subdiv.	Yes	M	Yes	Yes	No	No	No	No	138	80%	110	87	174	87	43	17	43	108	36	
731	160.00	US 395	24	Homes	Yes	M	Yes	Yes	No	No	No	No	138	90%	124	98	196	98	49	20	49	123	41	
730	160.00	US 395	14	Homes	Yes	M	Yes	Yes	Yes	Yes	M	M	138	80%	110	87	174	87	43	17	43	108	36	
729	162.50	US 395	26	Homes	Yes	M	Yes	Yes	Yes	Yes	M	M	140	90%	126	99	199	99	50	20	50	125	41	
233	161.08	US 395	7	Undev.	Yes	M	Yes	Yes	No	M	No	M	139	50%	69	55	109	55	27	11	27	68	23	
232	161.43	US 395	1	Undev.	Yes	M	M	Yes	M	M	No	No	139	50%	69	55	110	55	27	11	11	28	18	
234	98.10	US 395	2	Subdiv.	Yes	Yes	Yes	Yes	M	M	No	No	84	45%	38	30	60	30	15	6	60	150	20	
323	154.25	US 395	11	Undev.	Yes	No	M	Yes	No	No	No	No	133	75%	99	79	157	79	39	16	16	40	26	
324	160.00	US 395	8	homes	Yes	No	M	Yes	No	No	No	No	138	75%	103	82	163	82	41	16	16	40	27	
325	160.00	US 395	6	Undev.	Marginal	No	M	Yes	No	No	No	No	138	75%	103	82	163	82	41	16	16	40	27	
179	160.00	US 395	79	Undev.	Marginal	No	No	M	No	No	No	No	138	40%	55	43	87	43	22	9	9	23	15	
178	120.00	US 395	63	Undev.	Marginal	No	M	Yes	No	No	No	No	103	50%	52	41	82	41	20	8	8	20	14	
455	120.00	US 395	10	Undev.	Yes	No	No	Yes	No	No	No	No	103	50%	52	41	82	41	20	8	8	20	14	
327	160.00	US 395	7	Undev.	Marginal	No	No	M	No	No	No	No	138	50%	69	54	109	54	27	11	11	28	18	
196	160.00	US 395	61	House	Yes	No	M	Yes	Yes	M	No	No	138	75%	103	82	163	82	41	16	16	40	27	
692	152.25	US 395	9	Undev.	Yes	No	No	Yes	No	No	No	M	131	50%	65	52	103	52	26	10	10	25	17	
337	160.00	US 395	22	Undev.	Marginal	No	No	M	No	No	No	No	138	40%	55	43	87	43	22	9	9	23	15	
186	145.47	US 395	7	House	Yes	No	M	Yes	Yes	M	No	No	125	50%	63	49	99	49	25	10	10	25	17	
185	160.00	US 395	18	Undev.	Yes	M	Yes	Yes	M	M	No	No	138	50%	69	54	109	54	27	11	27	68	23	
184	160.00	US 395	15	Undev.	Yes	No	M	Yes	No	No	No	No	138	50%	69	54	109	54	27	11	11	28	18	
336	153.55	US 395	26	Undev.	Marginal	No	No	Yes	No	No	No	M	132	75%	99	78	156	78	39	16	16	40	26	
183	160.00	US 395	16	Undev.	Yes	M	Yes	Yes	Yes	Yes	No	No	138	80%	110	87	174	87	43	17	43	108	36	
182	160.00	US 395	1	Undev.	Yes	No	M	Yes	No	M	No	No	138	50%	69	54	109	54	27	11	11	28	18	
181	160.00	US 395	7	Undev.	Yes	No	M	Yes	No	No	No	No	138	30%	41	33	65	33	16	7	7	18	11	
180	120.00	US 395	36	Undev.	Yes	No	M	Yes	No	No	No	No	103	30%	31	24	49	24	12	5	5	13	8	
229	160.00	US 395	30	Undev.	Marginal	No	No	M	No	No	No	No	138	20%	28	22	43	22	11	4	4	10	7	
228	160.00	US 395	30	Undev.	Marginal	No	No	M	No	No	No	No	138	20%	28	22	43	22	11	4	4	10	7	
227	160.00	US 395	134	Undev.	Marginal	No	No	M	No	No	No	No	138	20%	28	22	43	22	11	4	4	10	7	
226	160.00	US 395	80	Undev.	Yes	M	Yes	Yes	Yes	Yes	No	No	138	20%	28	22	43	22	11	4	11	28	9	
175	160.00	US 395	31	Undev.	Yes	M	Yes	Yes	Yes	Yes	M	No	138	60%	83	65	130	65	33	13	33	83	27	
176	120.00	US 395	29	Undev.	Marginal	No	No	M	No	No	No	No	103	50%	52	41	82	41	20	8	8	20	14	
177	160.00	US 395	31	Undev.	Yes	No	No	M	No	No	No	No	138	40%	55	43	87	43	22	9	9	23	15	
213	160.00	US 395	18	Undev.	Marginal	No	No	M	No	No	No	No	138	30%	41	33	65	33	16	7	7	18	11	
253	160.00	US 395	91	Undev.	Yes	M	M	Yes	No	M	No	No	138	50%	69	54	109	54	27	11	11	28	18	
225	120.00	US 395	126	House	Yes	Yes	Yes	Yes	Yes	Yes	M	M	103	100%	103	82	163	82	41	16	163	408	54	
200	160.00	US 395	28	Undev.	Yes	No	M	Yes	No	No	No	M	138	40%	55	43	87	43	22	9	9	23	15	
201	160.00	US 395	5	Undev.	Marginal	No	No	M	No	No	No	No	138	30%	41	33	65	33	16	7	7	18	11	
214	160.00	US 395	34	Undev.	Marginal	No	No	M	No	No	No	No	138	30%	41	33	65	33	16	7	7	18	11	
206	160.00	US 395	31	Undev.	Yes	M	Yes	Yes	No	M	No	M	138	50%	69	54	109	54	27	11	27	68	23	
296	160.00	US 395	18	Undev.	Yes	M	Yes	Yes	No	M	No	M	138	50%	69	54	109	54	27	11	27	68	23	

Table 4
LAND USE ASSESSMENT MATRIX

[illegible]

APPENDIX G

DEVELOPMENT STANDARDS

WORKING PAPER

PINE NUT ALLOTMENTS DEVELOPMENT STANDARDS

I. General Provisions

Title

This document shall be known as and may be referred to as the Pine Nut Allotments Development Standards.

Authority

The Pine Nut Development Standards is enacted by the Bureau of Indian Affairs pursuant to its general duty and broad authority over the Pine Nut Trust Lands. This document will be administered and enforced by the Bureau of Indian Affairs (BIA), Western Regional Office.

Purpose

The purpose of this document is to provide codified development standards and design criteria for the development of leased property included within the Pine Nut Allotments. This document is to be used in conjunction with the associated Pine Nut Allotments Land Use and Development Procedural Plan (date) that recommends the highest and best use for allotments included in the study area of the plan.

The purpose of these Development Standards is to further define standards to be met for development of leased lands within the Pine Nut Allotments which are included in the Land Use and Development Procedural Plan to protect the value and assets associated with these lands. These standards are intended as an aid in the submittal of plans for approval by providing detailed information on which to develop plans and to base a review of said plans. Where any specific conflicts exist between these standards and other applicable governmental codes and regulations, the most stringent shall take precedence.

Intent

The Pine Nut Allotments include parcels in a variety of sizes and configurations, with differing levels of services such as roads, water, service, electric power, gas, telecommunication lines, and amenities. Development of the Pine Nut Allotments will be guided by this document as well as applicable county, state and federal governmental codes and regulations. Together these conditions prescribe standards that will achieve a safe, sustainable, high quality, attractive, and desirable development within the Pine Nut Allotments.

Development standards for the Pine Nut Allotments are intended to provide a unified landscape and environmental setting. This concept will be realized through an emphasis on quality site planning, design standards, sustainability, environmental diligence, landscape materials, and signage and lighting design.

Severability

The provisions contained in these standards are severable. Should any section or provision of these standards be declared unconstitutional or otherwise invalid by any court of competent jurisdiction in a valid judgment or decree, such determination shall not affect the validity of these standards as a whole, or any part thereof, other than the specific part declared to be unconstitutional or invalid.

Similar Use Determination

The BIA may authorize a use not specifically listed within a use feasibility designation if it is determined that the use is similar to other permitted or conditional uses in the use feasibility designations, provided that the use is not determined to be prohibited.

Applicability

The Pine Nut Allotments Development Standards shall apply to all leased lands within the Pine Nut Allotments included in the Plan and shall bind all persons possessing allotment trusts, heirs, and other successors-in-interest.

The lessee or developer, hereinafter referred to as the “applicant” of parcels within the Pine Nut Allotment area, should familiarize themselves with the intent and requirements of these guidelines and all applicable governmental codes and regulations. They shall implement all those provisions applicable to their specific development. This will allow expeditious completion of the review process by the Bureau of Indian Affairs, and hereinafter referred to as the “BIA”, and/or their designated agents.

Pine Nut Allotments include discrete areas that have been assessed for development suitability on a variety of land uses depending on location, access, development feasibility, topography, and proximity and ability to provide services which are presented in the Pine Nut Land Use and Development Plan.

Objectives

The Pine Nut Allotments Development Standards attempts to achieve the following:

1. Provide comprehensive, consistent and clear design criteria for allotment lessees, developers, and reviewing staff.
2. Promote site design that provides for the public health, safety, and welfare for residents and visitors alike.
3. Promote sustainable development practices with the following Sustainability Goals:
 - To the greatest extent possible, new construction shall incorporate sustainable materials and construction practices
 - New structures shall incorporate design and technologies to reduce energy use (including but not limited to heating and cooling) to the greatest extent possible
 - Minimize cut and fill and extensive grading to prevent erosion and sedimentation
 - Reuse surface soils on-site
 - Reduce irrigation requirements and employ xeriscaping methods where feasible. Use drought tolerant and native plants
 - Consider LEED Certification for new construction
 - Utilize building materials from certified sources and suppliers who provide recycled products

- Preserve natural features through restoration, maintenance and enhancement, and discourage natural feature removal
4. Promote designs that will provide safe and convenient vehicular, pedestrian, and bicycle accessibility and circulation between and within developments.
 5. Encourage sustainable and quality architectural design and building materials, which are aesthetically pleasing and provide human scale within commercial, industrial, institutional and residential developments.
 6. Coordinate building design, signage, lighting, landscape design to provide diversity, variety in building form and type, open spaces, and site features while maintaining a sense of design continuity throughout the site.
 7. Protect the scenic views and prevent unsightly developments.
 8. Promote harmony between new and existing developments and encourage shared access and parking between adjacent compatible land uses.
 9. Provide Residential developments that promote neighborhood identity and neighborhood amenities.
 10. Provide economic development opportunities in a well-planned, unique, and orderly manner.
 11. Create opportunities for both tribal and non-tribal businesses to thrive.

II. Use Feasibility Designations

The Pine Nut Allotment Land Use and Development Plan indicate each allotment's suitability for various types of development. Allotments that are not included in the Master Plan are generally most suited for cultural, non-commercial recreational, natural resource and in some cases individual residential use.

Uses

This section outlines which uses are allowed, conditional, temporary or prohibited uses upon leased lands within the Pine Nut Allotments in compliance with the Pine Nut Allotment Land Use and Development Plan, the provisions contained in this Title and applicable state and federal laws and regulations.

Allowed Uses (A)

The following uses subject to this document are allowed as a permitted use upon the issuance of a Type I Development Permit. Single family residential use will require proof of adequate provisions for potable water and sewage disposal. These uses are:

- Single family residential use
- Agricultural use of the land
- Home occupations including in-home daycare
- Public parks and playgrounds
- Accessory uses customarily incidental to the above uses and permitted in conjunction with such uses

Conditional Uses (C)

Conditional Use are those uses that require review on a case by case basis because of their size or operation. These uses are subject to the conditional use regulations because they may, but do not necessarily, cause impacts on the environment, require public services, change the character of an area, create or foster nuisances. A review of these uses is necessary due to the potential individual or cumulative impacts these uses may have on the surrounding area.

The conditional use review provides the reviewing authority an opportunity to allow the use when there are minimal impacts, to allow the use but impose conditions specifying mitigation measures to address identified impacts or to deny the use if the impacts are substantial and the impacts cannot be mitigated.

The following uses require the approval of a Type II-Conditional Use Permit and include all uses not specified as a permitted, temporary or prohibited use including:

- Commercial uses including retail stores and services and wholesale businesses
- Multi-family residential use
- Professional office, clinics, or services
- Manufactured home park
- Assisted living or group care facility
- Public or municipal buildings
- Utility or telecommunication facilities
- Schools and educational facilities
- Commercial Recreational use
- Resort or overnight accommodation facilities
- Industrial use and facilities
- Grading for more than 500 cubic yards
- Off-premises signage

Temporary Uses (T)

The following uses are allowed on a temporary basis after application and approval from the BIA for a period not to exceed twelve (12) months, with the intent to discontinue such use after the time period expires:

- Emergency non-commercial telecommunications
- Temporary batch plants
- Temporary construction or sales offices
- Temporary dwelling units
- Seasonal sales lots

Prohibited Uses (P)

Those uses that create noise, vibration, odor, heat and glare that are discernable from the parcel line and cannot be effectively mitigated are prohibited.

III. Type I and Type II Application Procedure and Requirements

A. Development Review

Purpose. The purpose of these provisions is to:

- Provide rules, regulations and standards for efficient and effective administration of development review
- Carry out the Pine Nut Land Use and Development Plan and the highest and best use recommendations based on the criteria set forth in this document
- Promote the public health, safety and general welfare
- Lessen or avoid congestion in the streets, and secure safety from fire, flood, pollution and other dangers
- Provide adequate light and air, prevent overcrowding of land, and facilitate adequate provision for transportation, water supply, sewage and drainage
- Encourage the conservation of energy and resources
- Encourage efficient use of land resources, full utilization of urban services, transportation options, and human-scaled design
- Ensure compliance with the land use plan and development criteria

Applicability

There are two types of development review processes, Development Review I and Development Review II-Conditional Use Permit. All new developments and modifications of existing developments, shall be require one of the two reviews, except regular maintenance, repair and replacement of materials (e.g., roof, siding, awnings, etc.), parking resurfacing, and similar maintenance and repair shall be exempt.

All plans, specifications, reports and other documents prepared by a registered professional must be stamped or sealed and wet signed in accordance with state law. The architect or engineer of record shall take responsibility for all architectural components and must wet stamp and sign all associated plans.

All architects, engineers, and contractors shall be licensed in the State of Nevada.

All applications must be complete before the permit issuing authority is required to consider the application. An application is deemed complete when it contains all of the information that is necessary for the permit issuing authority to decide whether or not the proposed development, if completed as proposed, will comply with all of the requirements contained in these provisions and applicable local, state and federal laws and regulations.

Notification and agency review requirements

Public notification requirements for a Type I development review proposal is at the discretion of the BIA. Public notification for a Type II development review proposal (Conditional Use Permit) is required as outlined below:

If the reviewing authority determines that the request will have, or may have, substantial impact on surrounding properties, he shall, at least ten (10) days before taking final action on the permit requested, send a written notice to those persons whose property is adjacent to the allotment that is subject to the application, informing them that:

- An application has been filed for a permit to authorize the identified property to be used in a specified way
- All persons wishing to comment on the application should contact the reviewing authority by a certain date

- Persons wishing to be informed of the outcome of the application should send a written request for such notification from the reviewing authority

The BIA may solicit comments from applicable service providers and governmental agencies in the course of the review process for all Type I and Type II development permits.

Building Permits

The Building Permit process is defined by the BIA's Planning Office. This process includes:

- Consultation with the Cultural Resource Protection Program and development of a cultural resource protection agreement prior to any ground-disturbing activity
- Approval of applicable access permits
- Trees within one hundred (100) feet of residents and other principle structures shall be thinned so that crowns do not touch each other and pruned of all limbs within ten (10) feet of the ground

Development Review Type I

Development Review I is a non-discretionary or "ministerial" review conducted by the BIA through an administrative review process without a public hearing. It is for less complex developments and land uses that do not have significant design review issues. Development Review I is based on clear and objective standards and ensures compliance with the basic development standards such as building setbacks, lot coverage, maximum building height, and similar provisions and meets the purpose and goals of the Pine Nut Allotments Land Use and Development Plan.

The applicant requesting a Type I development review shall submit a scaled site plan and elevation views and other support drawings, calculations, and documentation showing the location and dimensions and all proposed improvements proposed, including proposed structures or modifications, landscaping, fences, signage, parking, access, topography, adjacent uses, existing vegetation and applicable environmental information to the site as required. The applicant shall also provide a written narrative outlining all information relevant to the proposed use. The reviewing agency may require additional information and plans relevant to its consideration of whether the applicant meets the development standards.

Development Review I is required for development types listed below.

- Single-family detached dwelling (including manufactured homes), when required by a condition of land division approval
- Building additions of not more than 500 square feet
- Minor modifications to development approvals
- Home occupations including in-home daycare
- Temporary use, except that temporary uses shall comply with the procedures and standards for temporary uses
- Accessory structures with less than 600 square feet of floor area, including accessory dwellings

Development Review Type II-Conditional Use Permit

Development Review II is a discretionary review conducted by the BIA through an administrative process and requires public notification of adjacent property owners as outlined above. At the discretion of the BIA, the review may include a third party design professional.

The Type II Conditional Use Permit process applies to all developments contained in the Pine Nut Land Use and Development Plan except those specifically listed under the Type I development review process or those uses deemed to be prohibited uses. Development Review II is required for development types listed below:

- Commercial uses including retail stores and services and wholesale businesses
- Multi-family residential use
- Professional office, clinics, or services
- Manufactured home park
- Assisted living or group care facility
- Public or municipal buildings
- Utility or telecommunication facilities
- Schools and educational facilities
- Commercial Recreational use
- Public Parks and recreation facilities
- Resort or overnight accommodation facilities
- Industrial use and facilities
- Grading for more than 500 cubic yards
- Off-premises signage

Approval Criteria

The Type II development review process ensures compliance with the basic development standards of the land use type (e.g., building setbacks, lot coverage, maximum building height), as well as the more detailed design standards and public improvement requirements.

The BIA after the review of the application materials and other pertinent documents will determine if the application is complete. All applications must comply with the following applicable provisions:

- Conformity with the goals and policies embodied in the Pine Nut Allotments Land Use and Development Plan
- Standards which are generally or specially applicable to particular uses including specific conditions relative to operation of the use
- Compatibility between the proposed development and adjacent development and uses
- Preservation of the character and integrity of adjacent development and uses
- Will not significantly adversely affect the environment
- Will not significantly adversely affect cultural resources
- Protection of the health, safety and general welfare of the planning area

Where additional conditions are imposed, the body imposing the conditions shall make findings which embody the basic purpose of the conditions placed on the application.

The BIA may deny a Type II Conditional Use Permit if it concludes that based on the information submitted in the application, and public and agency comments that if completed as proposed, the development, more probably than not:

- Will materially endanger the public health or safety
- Will substantially injure the value of an adjoining or abutting property
- Will not be in harmony with the area in which it is to be located
- Will not be in general conformity with the Pine Nut Allotments Land Use and Development Plan
- Will significantly adversely affect the environment
- Will significantly adversely affect cultural resources

Submittal Requirements

Site plan shall contain the following information:

- The site plan shall be drawn to scale with the scale identified on the plan. The scale shall be no smaller than 1 inch equals 100 feet. The plan should show property boundaries, existing and proposed land uses, existing and proposed transportation facilities, natural features, and any other pertinent information that would help identify how the proposed use is compatible with the surroundings. The reviewing authority shall (where applicable) refer the submittal or portion thereof to other agencies or individuals for their review and comment.
- A site map showing existing and proposed property lines, easements, right-of-ways, and ownership of abutting properties
- The plan shall show its relationship to adjacent properties
- The plan shall include any existing structures on the property and indicate the setback distances from the property lines. Any wells, cisterns, septic tanks, or underground storage tanks shall be shown on the plan
- Existing utilities on or adjacent to the property shall be indicated
- Location of existing and proposed paving, parking, and loading facilities including accessible spaces
- Location of existing and proposed fences along with their heights and type of materials
- Any other relevant site characteristics

A Grading plan.

Access information indicating how access standards are met:

- Distances to neighboring constructed public access points, median openings, traffic signals, intersections, and other transportation features on both sides of the property including the section of roadway between the nearest upstream and downstream collector.
- Number and direction of site-access driveway lanes to be constructed, as well as internal signing and striping plan
- All planned transportation features on the local transportation system (such as auxiliary lanes, signals, etc.)
- Trip generation data or appropriate traffic studies, if applicable
- Parking and internal circulation plan
- Existing and proposed walkways and sidewalks

The location and size of any existing and proposed signs.

Landscaping, both existing and proposed.

Drainage provisions for all impervious surfaces.

Time of Review

The BIA will determine if the application is complete and has ten (10) working days in which to make a determination of completeness.

If the application is incomplete, the Applicant will be informed and will have twenty (20) working days to provide the missing information.

Once the application is complete, the BIA has thirty (30) calendar days to issue a preliminary finding. They may determine that the application is compliant with the design criteria and standards within this document; determine that the application is compliant if the applicant makes Committee recommended modifications; or, determine that the application is non-compliant.

The applicant then has thirty (30) working days to revise the application and resubmit it to the reviewing authority.

When final plans are submitted for review, the BIA has ten (10) working days to make a final finding.

Time of Expiration

Unless otherwise specifically provided for, development permits shall automatically expire and become null or void within one (1) year after the issuance of such if:

- The use authorized by such permits has not commenced, in circumstances where no substantial construction, erection, alteration, excavation, demolition, or similar work is necessary before commencement of such use, or
- Less than ten (10) percent of the total cost of construction, erection, alteration, excavation, demolition, or similar work on any development authorized by such permits has been completed on the site

The BIA may extend for a period up to six (6) months that date when the permit would otherwise expire if he concludes:

- The permit has not yet expired; and
- The permit recipient has proceeded with due diligence and in good faith; and
- Conditions have not changes so substantially as to warrant a new application. Successive extensions may be granted for periods of up to six months upon the same findings. All such extensions may be granted without resort to the formal processes and fees required for a new permit.

B. Leasing Process

Initial Review

Prospective tenants start an initial confidential consultation with the Pine Nut BIA Reality Department to review the business and financing plan as well as the incentives available and also to review the development concept and discuss fit with these guidelines.

Letter of Intent

The next step is a confidential Letter of Intent with the Pine Nut Allotment governing body. This Letter of Intent will recognize the mutual commitment of the tenant and the Pine Nut Allotment governing body to proceeding through the development and leasing process.

Leasing

Once the Letter of Intent is completed, a Pine Nut Allotment governing body and tenant will proceed to finalize the ground lease. The lease must be approved by the Bureau of Indian Affairs prior to commencement of construction activities.

Initial Development Review

Once the Letter of Intent is completed, the tenant shall submit site plan and building drawings at schematic design stage (roughly 30% completion) for preliminary Development Review.

Development Review

Development Review will proceed as outlined herein.

Fees

Review fees will be determined by the BIA in conjunction with the application review required for each specific development proposal. If the BIA determines that a third party design professional shall conduct

any portion of the development review process, the applicant will be responsible for the review fees which shall be the actual cost of the review professional fees.

Applications for Areas without Existing Infrastructure

Applications for new development may be accepted prior to infrastructure and utility construction if all of the required guarantees and financing are in place to ensure that infrastructure can be completed; and the applicant parcel is legally defined. No occupancy may be granted to buildings until all required infrastructure improvements are in place.

Conformance with Approved Plans

Final Site Development Plans and Building Permit Plans shall be substantially the same as the approved plans. Major modifications from the approved plans will require additional review or be cause for final site plan or building permit denial.

IV. Development Standards

Purpose

Building design and site design are important to the long-term success and livability of the Pine Nut Allotments and the surrounding area. Lessees, surrounding residents, and visitors will be attracted to a built environment with high quality and consistent design standards, where each development is consistently executed, well maintained and functional. These standards will also help provide protection of the value and assets associated with the allotments.

General

All requirements contained in this section represent the minimum standards for areas subject to this document.

Building Setbacks and Buffer Standards

Building setbacks may be required to be consistent with previously established buildings in the development areas and may be required to setback greater distances than the minimum standards. The following setbacks are the minimum building, parking and livestock grazing or boarding setback areas required:

A minimum buffer area of 100 feet will be required along the outside perimeter of an existing allotment area to minimize impacts to adjacent allotments. These buffer areas must be maintained in their natural vegetative state except when access is required to an adjacent allotment.

In addition to the required perimeter buffer areas, minimum building setbacks shall be required on all existing and proposed lots.

Minimum Front Yard Building Setback (less than 10 acres) – 50 feet

Minimum Front Yard Building Setback from Hwy 395 (less than 10 acres) – 25 feet

Minimum Rear Yard Building Setback (less than 10 acres) – 50 feet

Minimum Side Yard Building Setback (less than 10 acres) – 50 feet

Minimum Street Side Yard Setback (less than 10 acres) – 50 feet

Minimum Front, Rear & Side Yard Parking Setback from Hwy 395 (less than 10 acres) – 25 feet

Minimum Front Yard Building Setback (greater than 10 acres) – 75 feet

Minimum Front Yard Building Setback from Hwy 395 (greater than 10 acres) – 50 feet

Minimum Rear Yard Building Setback (greater than 10 acres) – 75 feet
Minimum Side Yard Building Setback (greater than 10 acres) – 75 feet
Minimum Street Side Yard Setback (greater than 10 acres) – 75 feet
Minimum Front, Rear & Side Yard Parking Setback from Hwy 395 (greater than 10 acres) – 50 feet
Minimum Lot Width at Front Building Line – 175 feet
Maximum Lot Coverage – 35 percent
Maximum Building Height
 Residential Structures – 35 feet
 Commercial & Industrial Structures – 50 feet
 Accessory Agricultural Structures – 60 feet
Minimum Distance Between Structures – 15 feet
Minimum Lot Size - Minimum lot size shall not be less than 1 acre and will be based on providing adequate provisions for potable water and sewage disposal.

Allowed improvements within required building setback areas:

- Driveways per the requirements of the Douglas County Engineering standards
- Roof overhangs, bay windows, eaves, cornices, awnings and similar building supported elements may extend a maximum of 24 inches into the required setback areas from property lines
- Minor utility improvements such as transformers, meters, and mechanical equipment
- All setback areas for commercial and industrial uses shall be planted, improved or maintained in a manner compatible and complimentary to the architecture and landscape design concepts described herein

V. Design Criteria for Non-residential Uses

The following criteria apply to the commercial, industrial, Commercial Recreation/ Resort, and Planned Unit Development and uses.

SITE LAYOUT

Building Arrangement

Buildings should be arranged and located on a parcel so that:

- sustainable practices can be maximized
- conflicts between activities are minimized and safety is maximized
- unsightly activities are screened
- visual monotony is avoided
- safe pedestrian environments are created
- Commercial, industrial, and institutional buildings should orient the primary and public entry to clearly direct visitors
- Where multiple building occur on a parcel they shall be arranged to provide safe pedestrian areas and convenient access between areas. Accessory structures such as trellises, arcades, low walls can be used to visually and physically link multiple buildings
- Buildings shall be located in a manner that compliments adjacent properties that have a similar use. For example vehicle and pedestrian access between properties should be seamless and safe, Building setbacks be compatible for shared access and visual harmony.
- Drive through windows and drive in garage or loading doors should not face the Primary Street or access.
- Existing natural features should be retained and incorporated into the site layout to create a unique setting that reflects the natural environment to the greatest extent possible

- Storage areas and storage buildings shall be located in the rear of the site. Outdoor storage yards shall be screened with a six (6) foot opaque fencing, decorative wall, or evergreen shrubs
- Buildings, landscaping, grading, or other solid structures shall not be located within a clear vision triangle at any intersection of streets or driveways and streets

Circulation and Parking

The overall circulation pattern shall be designed to avoid conflicts between movement of pedestrians, vehicles and bicycles.

- The number of required parking spaces will be based on the use and the requirements listed in the Douglas County Development Code Chapter 20, and on a case by case review by the BIA based on the ITE Trip Generation Manual, as amended
- Parking stalls and access aisle dimensions requirements are specified in Douglas County Development Code Chapter 20 and shall be designed to insure emergency vehicle access to the site
- All parking areas shall comply with the requirements of the Americans with Disabilities Act
- Parking is not allowed between the parking setback line and the property line. The Parking setback area will be landscaped with shrubs and trees and decorative landscaping as required
- Parking that is adjacent to a residential use shall have a ten (10) foot landscape bed and a six (6) foot high decorative wall, fence or evergreen shrubs
- There are specific landscaping requirements associated with parking areas. See the Landscape Guidelines
- Rows with twenty-five (25) parking spaces or more must have an interior landscaped island that is a minimum of six (4) feet wide
- Large parking areas with more than fifty (50) spaces should be divided into a series of smaller connected lots and separated with landscape islands or the building.
- Parking aisles should be arranged to direct pedestrians parallel to cars to prevent crossing over aisles, between cars, and over landscape islands. Pedestrian walkways through parking areas may also be provided
- Provide a six (4) foot wide landscape strip or sidewalk between parking areas and buildings
- Where separate sites share parking and access, the circulation patterns must be coordinated with each other
- Parking area turning radii must accommodate emergency vehicles and meet AASHTO standards
- Parking areas shall be paved and graded in accordance with Douglas County Engineering standards
- Parking stalls should not be located where vehicles back into a primary ingress driveway or roadway

Vehicular Access

- Vehicular access to lots must be paved with asphalt or concrete paving or unit pavers and meet the Douglas County Engineering Design Criteria and Improvement Standards, as amended
- Shared driveways between abutting lots is encouraged. In such cases, a joint use maintenance and upgrading agreement between tenants is required
- Driveway access permits shall comply with the Douglas County Engineering Design Criteria and Improvement Standards, as amended
- Dimensional standards and spacing between driveways and driveways and intersections shall comply with Douglas County Engineering Design Criteria and Improvement Standards, as amended

Pedestrian Circulation

- All sidewalks will be Portland cement concrete or comparable concrete, brick pavers, or all weather material.
- Clear and direct concrete or asphalt walkways shall be provided to the main entries of all buildings and throughout the site. They shall be a minimum of four feet wide
- All sidewalks and pedestrian access ways must comply with the requirements of the Americans with Disabilities Act
- There shall be a connecting sidewalk or pedestrian walkway between entries in a multi-tenant building
- Pedestrian walkways shall be of a contrasting material or painted crosswalk when crossing paved vehicular surfaces
- Pedestrian walkways (except where crossing parking areas) shall be separated from vehicular drives by curbing or a landscape bed
- Pedestrian walkways (except where crossing parking areas) and plazas may be included as part of the minimum landscape area
- Uses that have frequent passenger drop off and pick up needs shall have a designated area close to an entry that does not conflict with pedestrian or vehicular circulation

Loading and Service Access

- Loading and service areas shall be on the side or rear of a building when required for the proposed use. They shall be screened from view of a public street and adjacent residential development
- The screen must be 6 feet high and constructed from concrete, masonry block, or solid vegetative plantings, or slatted chain link fencing facing a public street or adjacent to residential development
- Service and loading areas must be paved and clearly indicated with no parking signage or striping
- Access to loading areas should have adequate width and turning radii to accommodate truck access without multiple maneuvers
- Loading areas shall not interfere with on site circulation

Outdoor Storage

Outdoor storage areas that are accessories to a permitted use shall be adequately screened from view with a 6 foot high opaque wall, or solid vegetative screening or a slatted chain link fence.

Snow Storage

Developments should include open areas with good sun exposure where snow can be placed out of the access and parking areas and without damage to landscape planting.

Trash enclosures

Trash areas must be screened from the street with a six foot high solid or slatted fence, wall, or evergreen shrubs. They shall have a steel post mounted gate for access.

Utilities and Mechanical Equipment

- Electrical and telecommunication vaults shall be located where there is adequate space to provide appropriate screening. Locations near or adjacent to main building entries or main driveway entries are discouraged. FDC's (fire connections) locations will be determined through consultation with the Fire District
- Where space allows, screen above ground utility vaults with sight-obscuring vegetation or walls

- To the greatest degree possible, roof mounted mechanical equipment shall be screened with building parapets or screening material that matches the building

Fencing and Walls

- Walls should blend in with the building color and materials or surrounding environment
- Fencing between a building and street shall not exceed six-feet and shall not exceed three (3) feet within the clear view triangle area
- Razor wire fencing is not allowed

Signage

Signs associated with commercial and industrial uses

Signage associated with commercial and industrial uses shall:

- Not exceed a maximum total area for all signs of four hundred (400) square feet
- Exceed a maximum height above the ground of thirty-five feet
- Light control to exclude directed light or bright glare onto streets in such a manner as to be a traffic hazard
- Not located within a public right-of-way
- No sign structures or parts to extend over any part of a street traffic way
- One (1) sign may be permitted as a free standing structure to identify an establishment or place of business
- All sign structures shall be of permanent type construction and the location and structural design shall be such as to not interfere with the safe and efficient use of off-street parking and loading areas including aisle ways and access driveways thereto, or with roads within or adjoining the site
- Any illuminated sign which does not maintain, when in operation or se, a stationary light of constant intensity and color shall be prohibited
- Plans for such signs and their location shall be submitted as a part of the development permit

Off-premises signage

- Off-premises signage shall not be permitted in public right-of-ways, not exceed three hundred (300) square feet in area and a height of thirty (30) feet above the level of the adjoining road. The signs shall not exceed a density of two (2) per mile including signs on both sides of the road, nor spaced closer than two thousand (2,000) feet apart. Any lighting shall be controlled to eliminate direct light or strong glare and reflection toward adjacent streets or roadways or existing structures

Fire Standards

As part of the building permit review process the following minimum fire standards are required for all residential, commercial, and industrial construction:

- Roofs shall be made of noncombustible materials as described in the International Building Code
- All wood stoves must be approved by the Environmental Protection Agency (EPA)
- All chimneys shall be equipped with approved spark arrestor and all tree branches within fifteen (15) feet of a chimney shall be removed
- All weeds and combustible debris (except for scattered ornamental(s) shall be cleared for a distance of at least thirty (30) feet from each structure

Lighting

- Lighting fixture shall be full cut off light fixtures that do not emit light above the 90-degree

- horizon and must be so controlled as to prevent glare on streets and adjoining property
- Lighting shall be designed to insure uniform light levels and provide appropriate safety and security for the development
- The height of parking lot light poles shall not be greater than 15 feet adjacent to residential or agricultural uses and no greater than 25 feet in other areas
- Light poles shall be engineered for local wind speeds. Allowable pole materials include cast aluminum, concrete, or steel. All finishes shall be permanent and factory applied
- Pedestrian level lighting shall be provided for all pedestrian circulation areas
- Up lighting is allowed to illuminate building fronts and signage at night with the review and approval of a Type I development permit
- Flashing lights are not allowed

Stormwater Detention and infiltration areas

- Where the topography allows storm water should be directed toward shallow stormwater swales that parallel the street. They should include native bunch grasses and rocks to dissipate energy and slow the flow of water and provide for infiltration
- Where swales are not feasible water should be directed to detention basins. The detention basins may be gradually sloped and grassed for use as open space at other times. Where they abut a public street and present a hazard they should be fenced with a low maintenance decorative metal fence. Use only non buoyant material within the detention basins
- Where site conditions allow it, stormwater shall be directed to an infiltration pond or vault where it will be treated for water quality and then infiltrate into the ground or be released into an appropriate outlet at pre-development rates
- Stormwater Detention designs must be reviewed and approved by the Douglas County Engineering Department

Construction Activities

- Construction activity shall not block access to any other lot
- Construction activities shall not disrupt business or the operations of adjacent lot
- The applicant shall be responsible for the repair of any street, public feature, landscape material, utility, or adjoining property damaged during the course of construction
- The applicant is responsible for street cleaning necessitated by construction activity
- The applicant shall maintain a dust suppression program, water and wind erosion prevention and stabilization measures
- Construction activities shall be conducted between the hours of 7:00 am to 7:00 pm

Landscaping

Purpose

The guidelines provide a minimum standard to insure that the overall landscape reflects the character of the Pine Nut Allotments. Various types of land use and development will require different landscape treatment. The standards are designed to:

- Insure an overall aesthetic for each development area appropriate for the various land uses
- Provide adequate screening and transition between differing land uses
- Reduce erosion and stormwater runoff
- Promote health safety and comfort through air quality and shading benefits of plant material
- Soften the visual impacts of paved surfaces and vehicular uses

General Landscaping Requirements

- Plants shall be appropriate for the climate and consistent with the recommended plant list in Appendix A
- Use of native vegetation or drought tolerant vegetation is encouraged to reduce irrigation water requirements
- All required Landscaping shall be installed, maintained, and replaced as necessary by the owner or lessee of the lot
- Existing vegetation should be preserved and incorporated into the Landscape and Site Plan as much as possible
- Plants used should be at a scale that is appropriate for to accomplish the intended purpose
- All areas where new landscaping is required shall be equipped with an automatic irrigation system. The system shall be designed, installed and operated to maintain the plant materials in a healthy condition. However, utilization of native and drought-tolerant plants is encouraged as much as possible
- Storm water filtration or detention facilities and required buffer areas may be included as part of the required landscape areas as outlined below.

Entry areas

Landscaping should be used to identify and enhance entry drives.

Between parking areas and the primary street or access

There should be a combination of trees shrubs and groundcover treatment within a 10 foot minimum landscape area.

Interior Parking area

Required interior parking islands shall have a shade tree. The remaining area shall have groundcover or shrubs providing 50% vegetative cover. The remaining 50% of the area may be decorative rock.

Building Perimeter Landscaping

The landscape areas at the perimeter of buildings shall have ground covers, shrubs, and trees. Evergreen and deciduous trees shall be used as accents and to provide shade. Hardscape may be used as a design element at entry areas to provide pedestrian plazas. Building Perimeter landscape is a general landscape style whose purpose is provide visual enhancement and softening to the development, rather than screening for a particular activity. Perimeter landscaping shall comply with the fire standards contained in this Title.

Open Space and Undeveloped Lot Areas

Open space and undeveloped portions of a developed lot may remain with undisturbed native plant material or cultivated crops and do not require irrigation. Undeveloped but disturbed areas shall be seeded with native grasses and maintained to prevent noxious weeds, erosion and dust.

Landscape design for the highway corridor includes both the natural highway right of way landscape and the areas within the development setback line and the lease lines of abutting properties. Increased development setback lines along the Highway have been established to provide ample space to create a landscaped corridor along the highway. A landscape buffer area of ten (10) feet within the corridor that incorporates an enhancement of the native vegetation and a material is required.

Maintenance Standards

Lessees shall maintain their lots in a neat and orderly fashion at all times, free of fire hazards and injury risks, including any area set aside for future development. Lessees are responsible for:

- Regularly scheduled maintenance to buildings and all landscaped areas
- Ensuring that no noxious or invasive weeds are allowed to become established on their lots

- Removing trash, debris or rubble of any kind, including windborne noxious weeds
- Maintaining adequate exterior lighting
- Replacement of dead or damaged landscape material in a timely manner
- Trimming and maintaining landscape material in a neat and tidy manner
- Removal of any accumulation of non-operational and/or non-essential equipment or material

Building Design

Buildings are often the most significant feature of a site development. The intent of this section is to provide for the construction of high quality structures that:

- Compatible with the surrounding development
- Function efficiently for the individual user
- Allow architectural variety and visual interest
- Additions to existing buildings should blend with the existing architecture.

Metal (Steel) buildings are subject to specific criteria outlined in the section relating to Metal Buildings. The use of unadorned plywood panels is not allowed.

Tilt-up concrete, masonry/block, metal (steel) and wood construction are allowed provided that the construction complies with the International Building Code, International Fire Code and the additional fire provisions contained in this Title.

Accessory structures shall be architecturally compatible with the main structure.

Metal (Steel) Buildings

- Metal building facades shall incorporate concrete or masonry wainscoting on walls facing public streets and provide visual interest at the entry
- Acceptable exterior metal walls and roof panels shall be anodized aluminum, galvanized steel, and weathering steel
- Galvanized and coated steel shall have factory-applied baked paint finish, resistant to chalking, fading and failure. Exterior finishes shall not cause glare
- Metal panels shall have sufficient gauge and quality to ensure a rigid surface
- Structural members and fastening devices shall be on the interior except when used for design purposes. Exterior fasteners must be rustproof

VI. Subdivision Standards

SUBDIVISION DESIGN

Purpose

- To assure that development occurs in an orderly, efficient, and cost-effective manner, while preserving the livability of the Pine Nut Allotments
- Individual subdivisions should integrate with the adjacent developments with respect to the street system, pedestrian connections and appropriate buffering
- Grading concepts shall respect the natural terrain and minimize grade differentials
- When significant slopes are present between properties, rear and side yard property lines shall be located at the top of the slope to avoid maintenance problems
- Subdivision design shall minimize the conflict between differing land uses. Parkways, right of way landscaping, and oversized lots can provide separation between residential and non-residential uses

Regulation of Subdivisions

No person may subdivide their land except in accordance with all of the provisions contained herein. In particular, no person may subdivide until a final plat of the subdivision has been approved in accordance with the provisions contained in this plan and recorded in Douglas County and with the Bureau of Indian Affairs Title Office.

Minor subdivisions, four (4) lots or less require a one step administrative approval process of the approval of a final plan in conformance with the provisions outlined herein. A major subdivision, five (5) lots or more are subject to a two step approval process with the physical improvements and lot layout to be reviewed via a preliminary plat process and the division of lots to be permitted after final plat approval.

An engineer retained by the developer shall certify that all facilities and improvements have been constructed or bonded for in accordance with the requirements contained in these provisions. This certification shall be a condition precedent on the recording of the final plat for minor or major subdivision and prior to the issuance of a building permit.

All lots or parcels proposed to be developed and are divided in a major or minor subdivision shall verify adequate provisions for potable water, sewage disposal and access prior to final plat approval.

Minor Subdivision Approval

The reviewing authority shall approve or disapprove a minor subdivision final plat in accordance with the provisions of this section.

An applicant for minor subdivision plat approval shall submit a site plan to the reviewing authority for a determination of whether the approval process authorized by this section can be utilized. The reviewing authority may require the applicant to submit whatever information is necessary to make this determination, including but not limited to, a copy of the tax map showing the land being subdivided and all lots previously subdivided from that tract of land within the previous five (5) years.

Once the site plan is reviewed and preliminarily approved the applicants for minor subdivisions shall submit to the reviewing authority a copy of the plat map drawn in waterproof ink on a sheet made of material that will be acceptable to the auditor's office in the county and the BIA Title Office for recording purposes and having the dimensions as follows:

A 21" by 30" Mylar plat at a scale of not more than 1" equals 100' that contains the required endorsements and contains:

- The name of the subdivision, which name shall not duplicate the name of any existing subdivision as recorded in the applicable recordation office
- The name of the subdivision lessee
- The township, county, and state where the subdivision is located and its status as trust land
- The name of the surveyor and his/her registration number and the date of the survey
- The scale according to which the plat is drawn in feet per inch or scale ratio in words, and
- All of the additional information required by the regulations contained in these provisions

The reviewing authority shall approve the proposed plat unless he finds that the plat or the proposed subdivision fails to comply with one or more of the requirements of these standards or differs

significantly from the sketch map submitted that authorized the preparation of the final plat.

If the final plat is disapproved by the reviewing authority, the applicant shall be furnished with the written statement of the reasons for the disapproval.

Approval of the final major subdivision plat is contingent upon it being recorded within sixty (60) days after the approval certificate is signed by the reviewing authority or his designee.

Major Subdivision Approval

The reviewing authority shall approve or disapprove a major subdivision final plat in accordance with the provisions of this section.

An applicant for a major subdivision plat approval shall submit a site plan to the reviewing authority for a determination of whether the approval process authorized by this section can be utilized. The reviewing authority may require the applicant to submit whatever information is necessary to make this determination.

Once the site plan is reviewed and preliminarily approved the applicants for major subdivisions shall submit to the reviewing authority a copy of the plat map drawn in waterproof ink on a sheet made of material that will be acceptable to the auditor's office in the county and the BIA Title Office for recording purposes and having the dimensions as follows:

A 21" by 30" Mylar plat at a scale of not more than 1" equals 100' that contains the required endorsements and contains:

- The name of the subdivision, which name shall not duplicate the name of any existing subdivision as recorded in the applicable recordation office
- The name of the subdivision lessee
- The township, county, and state where the subdivision is located and its status as trust land
- The name of the surveyor and his/her registration number and the date of the survey
- The scale according to which the plat is drawn in feet per inch or scale ratio in words, and
- All of the additional information required by the regulations contained in these provisions.

The reviewing authority shall approve the proposed plat unless he finds that the plat or the proposed subdivision fails to comply with one or more of the requirements of these standards or differs significantly from the site plan submitted that authorized the preparation of the final plat.

If the final plat is disapproved by the reviewing authority, the applicant shall be furnished with the written statement of the reasons for the disapproval.

Approval of the final major subdivision plat is contingent upon it being recorded within sixty (60) days after the approval certificate is signed by the reviewing authority or his designee.

Site Plan Requirements

Site plan shall contain the following information:

- The site plan shall be drawn to scale with the scale identified on the plan. The scale shall be no smaller than 1 inch equals 100 feet. The plan should show property boundaries, existing and proposed land uses, existing and proposed transportation facilities, natural features, and any other pertinent information that would help identify how the proposed use is compatible with the surroundings. The reviewing authority shall (where applicable) refer the submittal or portion

thereof to other agencies or individuals for their review and comment.

- Plat map showing existing and proposed property lines, easements, right-of-ways, and ownership of abutting properties.
- The plan shall show its relationship to adjacent properties
- The plan shall include any existing structures on the property and indicate the setback distances from the property lines. Any wells, cisterns, septic tanks, or underground storage tanks shall be shown on the plan
- Existing utilities on or adjacent to the property shall be indicated
- Location of existing and proposed paving, parking, and loading facilities including accessible spaces
- Location of existing and proposed fences along with their heights and type of materials
- Any other relevant site or environmental characteristics

A Grading plan.

Access information indicating how access standards are met:

- Distances to neighboring constructed public and private access points, median openings, traffic signals, intersections, and other transportation features on both sides of the property including the section of roadway between the nearest upstream and downstream collector
- Number and direction of site-access driveway locations to be constructed including length, width and base and surface improvements
- All planned transportation features on the local transportation system (such as auxiliary lanes, signals, etc.)
- Trip generation data or appropriate traffic studies for five or more lots

Drainage provisions to mitigate for all anticipated impervious surfaces.

Single Family and Manufactured Homes

- Accessory buildings except for agricultural structures should be visually similar to the primary building
- Metal (steel) roofs and buildings shall have a non-glossy surface
- Accessory dwelling units shall have the same architectural character as the primary residence
- Houses should be sited to consider solar and wind exposures
- Landform and topography should be preserved to minimize grading
- Driveways should be long enough so that vehicles will not obstruct the driveway and wide enough to allow emergency vehicle access

Street Design Provisions

- Access must be maintained to adjacent allotments
- Entrances and exits for vehicles shall be designed to encourage smooth traffic flow with controlled turning movements and minimum hazards to pedestrians, bicyclists, passing traffic, or to traffic entering or leaving the development
- Street design shall consider alternative modes of transportation such as, bicycle lane, sidewalk and pedestrian or equestrian trails, and public transit stops
- Safe and easy access for emergency vehicles shall be provided throughout the entire subdivision
- If private streets are allowed they must be built to all public road standards
- Subdivisions shall have access points connecting with existing County or State roads

- The layout of streets shall provide for the continuation of arterial, collector, connector, and local streets within the development and between adjoining developments when feasible. Through traffic shall be directed to arterial or collector streets
- When public access to adjoining property is required, this access shall be improved and dedicated to the County
- Street stubs shall be provided to allow for future access to adjacent undeveloped property as deemed necessary
- A street which is dedicated to the boundary of the subdivision or partition shall have a reserve strip deeded to the County for the purposes of controlling access from adjacent properties to said street until such time as the street is continued into the adjacent properties and constructed
- Streets within developments shall be designed to discourage the use of minor streets for through traffic
- Street alignments, intersections, and centerline deflection angles shall be designed to the standards of the Douglas County Roadway Standards
- Street intersections shall be as near to right angles as possible or as otherwise provided under the County Roadway Standards. Street jogs with offsets of less than 125 feet between centerlines shall be avoided
- Intersections with arterial streets should be separated by at least 1000 feet or as otherwise provided under the Douglas County Roadway Standards
- If existing streets provide adequate access to a minor or major arterial, new access roads shall enter on the lower classification street
- New roads terminating in cul-de-sacs are prohibited except where natural features (such as topography, streams, or wetlands), parks, dedicated open space, or existing development preclude road connections to adjacent properties, existing street stubs, existing roads or the proposed road system

Lot or Parcel Provisions

- Every lot or parcel shall abut or have adequate access to a public street or roadway and shall conform to the minimum frontage requirements
- Lots or parcels shall not be configured with un-useable awkward shapes
- Residential lots which have street frontage along two opposite boundaries are discouraged, except for reverse frontage lots which are necessary to separate residential development from arterial streets or to overcome specific disadvantages of topography and orientation
- Developments with reverse frontage lots shall have an additional 10 feet of width in addition to the minimum lot size and shall have a restriction at least one foot wide along the lot lines abutting the arterial street, across which there shall be no access. Alternatively, there shall be a note on the final plat stating that direct access to the arterial street will not be allowed

Stormwater detention and infiltration areas

- Where the topography allows storm water should be directed toward shallow stormwater swales that parallel the street. They should include native bunch grasses and rocks to dissipate energy and slow the flow of water and provide for infiltration
- Where swales are not feasible water should be directed to detention basins. The detention basins may be gradually sloped and grassed for use as open space at other times. Where they abut a public street and present a hazard they should be fenced with a low maintenance decorative metal fence. Use only non buoyant material within the detention basins

Planned Unit Development -Clustered development.

Clustered development occurs when a parcel or contiguous parcels under the same ownership are developed to cluster lots for residential use. The purpose of the clustered development is to provide a mechanism to preserve agricultural lands and open space, locate housing in areas which can readily be served by emergency services, utilities, etc. Clustered housing may be used when it meets the following requirements:

The minimum parcel size for clustered lots is 1/2 net acre when individual septic systems are required and one half acre when public sanitary sewer is available. Individual parcels are not to exceed five net acres.

- The number of clustered lots created on the parcel for single-family units cannot exceed the assessed site suitability density recommendation for the parcel as provided herein
- The remainder parcels with density removed are restricted to ranching, farming, recreational, or agricultural open space use as designated, and cannot be developed for any other use. The remainder parcels shall be further restricted by including in a deed restriction on the land owned in common by the owners or developer of the clustered parcels, or an open space easement in favor of the BIA, or a homeowners association approved by the BIA
- Clustered lots shall not be located in a special flood hazard area
- Clustered lots can only be located in areas that will support the installation and use of an individual sewage disposal system or connection with an existing sewer system. Clustered lots are prohibited in any other areas
- The provisions of this section are applicable through the approval of tentative and final subdivision or parcel maps

APPENDIX A: APPROVED TREE, SHRUB, AND GROUNDCOVER SPECIES LIST

Please Note: All landscape plans submitted are subject to site approval and are reviewed on a case-by-case basis according to the land use proposed, Species and varieties appropriate for the proposed development which are not included in this list are also subject to approval by the BIA or their designee. Note: An asterisk (*) denotes approved street trees.

DECIDUOUS TREES

Botanical Name

ACER freemanii

ACER ginnala

ACER negundo 'Sensation'

ACER negundo 'Variegatum'

ACER platanoides

ACER platanoides schwedleri

ACER pseudoplatanus

ACER rubrum

BETULA

BETULA pendula spp.

CARPINUS betula

CATALPA bignonioides 'Nana'

CATALPA speciosa

CEDRUS Atlantica 'glauca'

CELTIS occidentalis

CELTIS reticulate

CERRCIS occidentalis

CONTINU'S coggygria D

CRATAEGUS spp.

ELAEAGNUS angustifolia

FRAXIN3S americana

FRAXIN[JS excelsior

FRAXINUS ornus

FRA.XINUS pennsylvanica

FRAXEVUS quadrangulata

Common Name

'Jeffersned' Autumn Blaze Maple

Amur Maple (*)

Sensation Box Elder

Variegated Box Elder

Norway Maple (*)

Schwedler Maple

Sycamore Maple (*)

Red Maple

White Birch

Weeping Birch

European Hombeam

Umbrella Catalpa

Western (northern) Catalpa

Blue Atlas Cedar

Common. Hackberry (*)

Western Hackberry (*)

Western Red Bud Smoke

Tree

Hawthorn

Russian Olive

Autumn Purple Ash

European Ash

Flowering *Ash*

Green Ash

Blue Ash

GINKO biloba	Maindenhair Tree (male only)
GLEDITSIA triacanthos inermis	Thornless Honey locust
GYMNOCLADUS dioicus	Kentucky Coffee tree Golden
KOELREUTERTA paniculata	rain tree
LABURNUM	Golden chain tree
MALUS spp,	Flowering Crabapple
OSTRYA virginiana	Ironwood
PLATATT spp.	Plane tree
POPULUS tremulodes	Aspen
PRUNUS cerasifera atropurpurea	Purple Leaf Plum
PRUNUS persica	Flowering Peach
PRUNUS spp.	Flowering Cherry
PRUNUS triloba	Flowering Almond
PYRUS calleryana	Flowering Pear
QUERCUS coccinea	Scarlet Oak
QUERCUS douglasii	Blue Oak
QUERCUS gambelii	Gambel Oak
QUERCUS lobata	Valley Oak
QUERCUS palustris	Pin Oak
QUERCUS robur	English Oak
QUERCUS rubra	Red Oak
ROBINIA ambigua -	Idaho / Purple Robe Locust
ROBINIA hybrida	Flowering Locust
ROBINIA hybrida monument	Monument Black Locust
SALIZ matsundana	Corkscrew willow
SORBUS aucuparia	European Mountain Ash
TILIA cordata	Little Leaf Linden

EVERGREEN TREES

(Avoid planting any evergreen trees in the heat of summer, late fall, early winter and without adequate irrigation. Evergreens need a minimum of two winters with adequate water supply)

<u>Botanical Name</u>	<u>Common Name</u>
CALOCEDRUS decurrens	Incense cedar
CEDRUS atlantica	Atlas Cedar
CUPRESSUS <i>arizonica</i>	Arizona Cypress
JUNIPERUS communis	Swedish Juniper Western
J. Scopulorum spp.	Redcedar Redcedar
J. virginiana spp.	(eastern cedar)
Picea engelmannii	Engleman Spruce
P. excelsa	Norway Spruce Black
P. glauca densata	Hills Spruce Colorado
P. pungens glauca	Blue Spruce Colorado
P. pungens	Green Spruce
P. contorta	Shore Pine
PINUS aristata	Bristlecone Pine
PINUS contorta latifolia	Lodgepole Pine
P. densiflora	Japanese umbrella Pine
umbraculifera PINUS edulis	Two-needle Pinyon Pine
PINUS flexilis	Limber Pine
PINUS jeffrey	Jeffrey Pine
PINUS monophylla	Single-leaf Pinyon Pine
PINUS monticola	Western White Pine
PINUS mugo	Swiss Mt. Pine
PINUS nigra	Austrian Pine
PINUS ponderosa	Ponderosa Pine
P. strobiformis	Border Pine
PINUS sylvestris	Scotch Pine
TAXUS baecata	English yew
THUJA occidentalis varieties	Arborvitae

DROUGHT TOLERANT SHRUBS

Note: (D) denotes deciduous plants, (E) denotes evergreen plants and (*) denotes plants for hillside and erosion control

Botanical Name

Common Name

Shrubs (1-4 feet in height)

AEnelanchier (D)

Dwarf Serviceberry

Artemisia spp. (D)

Southernwood, Common Wormwood

Caragana pygmaea (D)

Pygmy Pea-shrub

Caryopteris (D)

Blue Spiraea

Chaenotaxcles japonica (D)

Japanese Flowering Quince

Deutzia gracilis (D)

Slender Deutzia Rose-

Deutzia rosea (D)

panicled Deutzia

Genista hispanica (D)

Spanish Broom

Penstemon newberri

Mountain Pride

Potentilla frnticosa (D)

Bush Cinquefoil

Ribes alpinum (D)

Alpine Currant

Salvia offleinalis(D)

Garden Sage

Santolina chamaecyparissus (E)

Lavender Cotton

Senecio cineraria (D)

Dusty Miller

Syraphoricarpos albus (D)

Common Snowberry*

Symphoricarpos chenaul ti (D)

Cbenault Coralberry

Symphoricarpos orbiculatus (D)

Indian Currant

Spiraea spp. (D)

Spiraea

Shrubs (4-8 feet in height)

Atriplex canescens (E)

Saltbrash, Quail Bush*

Berberis thunbergii (D)

Japanese Barberry

Berberis mentorensis (D)

Mentor Barberry

B.thunbergii "Crimson pygmy" (D)

Crimson Pygmy

Boxus microphylla Koreans (E)

Korean Boxwood

Boxus sempervirens (F)

Common Boxwood

Chaenomeles speciosa (D)

Common Flowering Quince

<u>Botanical Name</u>	<u>Common Name</u>
Deutzia scabra (D)	Fuzzy Deutzia
Eleagnus multiflora (D)	Cherry Eleagnus
Fallugia paradoxa (D)	Apache Plume
Mahonia aquifolium (E)	Oregon Holly Grape
Paeonia suffruticosa (D)	Tree Peony
Picea abies varieties (E)	Dwarf Norway Spruce
Pious maghus (E)	Dwarf Mugho Pine
Prunus besseyi (D)	Western Sand Cherry
Prunus glandulosa (D)	Dwarf Flowering Almond
Prunus tomentosa (D)	Nanking Cherry
Purshia tridentata	Bitterbrush, Antelope
Rhos arornotica (D)	Fragrant Sumac
Rhus trilobata (D)	Skunkbusb, Squawbush
Ribes aureum (D)	Golden Currant
Ribes sanguineum (D)	Winter Currant
Robinia hispida (D)	Rose Acacia
Rosa harisonii (D)	Hanson's Yellow Rose
Rosa hugonis (D)	Father Hugo Rose
Rosa rugosa (D)	Ramanas Rose/Sea Tomato
Spiraea spp. (D)	Spiraea
Syringa persica (D)	Persian Lilac
Tamarix odessana (D)	Odessa Tamarix
<i>Shrubs (Over 8 feet)</i>	
Amelanchierr alnifolia (D)	S erviceberry/Juneberry
Aronia arbutifolia (D)	Red Chokeberry
Arternisia tridentata (E)	Big Sagebrush
Buddleia davidii (D)	Fountain Butterfly Bush
Caragana arborescens (D)	Siberian Peasbrub
Coznus alba (D)	Dogwood
Corms mas (D)	Cornelian Cherry
Cor ^p us stolonifera (D)	Redosier Dogwood
Corylus maxima purpurea (D)	Smoke Bush

Botanical Name**Common Name**

Euonymus alatus (D)	Burning Bush/Winged Euonymus
Exochorda spp. (D)	Pearl bush
Forsythia intermedia (D)	Forsythia
F. suspensa (D)	Weeping Forsythia
F. viridissima (D)	Greenstem Forsythia
Hippophae rhamnoides (D)	Sea Buckthorn
Holodiscus discolor (D)	Cream Bush/Ocean Spray
Kerria japonica (D)	Kerria
Kolkwitzia amabilis (D)	Beauty Bush
Ligustrum amurense (D)	Amur Privet
L. vulgare (D)	Common Privet
Lonicea spp. (D)	Honeysuckle
Philadelphus coronarius (D)	Sweet Mock Orange
Prunus virginiana demissa (D)	Western Chokecherry
Pyracantha spp. (E)	Firethorn
Rhamnus frangula (D)	Alder Buckthorn
Rosa foetida (D)	Austrian Brier
Shepherdia argentea (D)	Silver Buffalo Berry/Wild Oleaster
Syringe chinensis (D)	Chinese Lilac
S. vulgaris (D)	Common Lilac
T. pentandra (D)	Five-Stamen Tamarix
Taxus spp.(E)	Yew
Viburnum spp, (D)	Fragrant Snowball/Arrowwood, etc.
Vitex agnuscastus latifolia (I)	Chinese Chaste Tree
Yucca glauca (E)	Yucca

DROUGHT TOLERANT**Botanical Name****Common Name**

Coronilla varia (D)	Crown Vetch
Cotoneaster horizontalis (D)	Rock Cotoneaster
Cotoneaster microphylla (E)	Rockspray Cotoneaster

Duehesnea Mica (D)
Eriogonum umbellatum (D)

Indian Mock Strawberry
Sulphur Flower/Wild Buckwheat

Botanical Name

Common Name

Genista sagittalis (D)	Broom
Helianthemum nummularium (E)	Sunrose
Hypericum calycium (E)	Aaron's BeardfSt. Johnswort
Iberis sempervirens (E)	Candytuft
Juniperus spp.(E)	Juniper
Mahonia nervosa (E)	Longleaf Mahonia
Mentha piperita (D)	Peppermint
M. spicata (D)	Spearmint
Phlox subulata (D)	Creeping PhloxlMoss Pink
Polygonum cuspidatum (D)	Japanese Knotweed
Sedum acre (E)	Golden Carpet
Teucrium chamaedrys (E)	Germander
Thymus praecox areticus (1)	Mother-of-Thyme/Creeping Thyme
Vinca minor (E)	Periwinkle

GROUNCOVER-OTHER

Achillea tomentosa	Wolly Yarrow
Aethoisnema coridi:folium warleyense	Stone-cress
Aigopodium podagraria variegatum	Variegated Goutweed
Alyssum saxatile (D)	Basket-of-gold
Arabis spp.	Rock -cress
Artemisia schmidtiana nana (D)	Silver mound artemisia
Artemisia stelleriana	Beach wormwood
Campanula earpatica	Carpathian bellflower
Cerastiuzn tomentosum (D)	Snow-in-summer
Coreopsis Verticillata	Coreopsis
Coronilla varia (D)	Crown vetch

Dianthus spp.	Pinks
Pestuca ovina glauca	Blue fescue -grass
Gypsophila repens	Dreeping gypsophlla
Hemerocallis spp.(D)	Daylily
Kniphofia uvaria (D)	Red-hot poker
Lavandula (l))	Lavender

Botanical Name

Lonicera "Hall's"
 Ophiopogon japonicas Pachysandra terminalis (shade) Phalaris arundinacea pieta Phlox amoena
 Phlox subulata
 Potentilla tridentata (D)
 Santolina (D)
 Sanonaria ocymoides
 Satureja montana
 Sedum spp. D) Sempervivum spp. (D)
 Sencio cineraria (D) Stachys lanata (D)
 Thymus spp. (D)
 Vinca Minor Viola
 Viloa pedtapedata (shade only)
 Ground honeysuckle Japan grass, lily-turf Japanese pachysandra Ribbon grass
 Trailing phlox
 Moss pink
 Three toothed cinquefoil Chamaecyparissus Rock Soapwort
 Winter savory Stonecrop Hen-and-chickens Dusty miller
 Lamb's ear
 Thyme
 Periwinkle
 Violet, Pansy
 Bird's-foot violet

APPENDIX H LEASE RECOMMENDATIONS

PINE NUT ALLOTMENTS LEASE ANALYSIS SUMMARY OF ISSUES

The following document is an analysis of issues found in the Master Lease granted to the developers of the Pine View Estates, with recommendations for changes in future leases made to developers on allotments in the Pine View Mountains of Western Nevada.

The recommendations are based on the assumptions that:

1. The land that is leased will be held in Trust and not made available for sale as it was in the Pine View Estates Master Lease.
2. All developments will conform to standards written specifically for that purpose in lieu of County zoning ordinances or other regulations that do not apply on Trust lands.
3. Leases will be written that will ensure long term revenues for the allotment holders that are based on market values and returns comparable to those that could be achieved by outright sale.
4. Leases will be made to developers who can demonstrate capability to perform the projects for which the leases are written, including financial capability.
5. Provisions will be made to ensure specific performance of the accepted development proposals.
6. Remedies for default will protect the allotment holders to preserve the values and integrity of the land.

It may not be possible to write a single Master Lease form that will apply to all leases because of variations in suitability of the land, proposed land uses, densities of development, infrastructure issues, and other factors. Also, there may be specific provisions required under the Federal Code and administrative rules that will need to be written by legal counsel for the Bureau of Indian Affairs. Following the discussion of issues arising from the Pine View Estates Master Lease, a sample lease is provided as a guideline for further development. Input is needed from BIA staff and Counsel to complete that sample lease in an acceptable form.

That input should include direction on some specific issues. Recognizing that the leases need to protect the allotment holders but still provide incentives for developers, the length of term of the leases has to be long enough to enable conventional financing of projects, probably through Deeds of Trust on the leasehold interests. The current policy of 50-year leases is adequate for a first conventional mortgage of 30 years, but it becomes a serious detriment to further financing as that term approaches. Any lender will want to be assured that sufficient time remains on the lease to ensure resale of the improvements if the original owner defaults. If only 20 years remains on the ground lease, it will be impossible to place a 30-year mortgage on the owned improvements.

For that reason, the BIA should work toward gaining legal authority to write leases for either a period extending to 99 years or with escalating terms, especially for residential developments. For example, if an original Lessee should default, desire to sell, or die during the term of the lease, then the lease might have a provision that any second owner could obtain an extension of the lease sufficient to obtain a new 30-year mortgage.

There is also the question of how the allotment lands should be valued to ensure that the lease revenues provide market rates of return over the full period of those leases. The standard method is to obtain a qualified appraisal to set the beginning market value and apply a base lease rate that produces a fair market return. For example, if the land is valued at \$40,000 per acre, setting the rate of return at 6.25% would translate into an annual lease rate of \$2,500 or a little over \$208 per month. The full value of the land would be recaptured by the allotment owner every 16 years during the term of the lease.

It is also necessary to apply an escalator that assures the lease revenues at least match rates of inflation over the term of the lease. A standard index used for that purpose is the consumer price index as calculated by the U.S. Bureau of Labor Statistics. Specific guidelines are provided by the BLS on its web site on how to use the CPI to adjust contract terms over time (<http://www.bls.gov/cpi/cpi1998d.htm>).

A cash flow projection based on CPI adjustments may appear to end up with a net present value equal to the original market value, which will be less than the value of proceeds from a sale that are invested at above-CPI rates of interest. For example, the annual CPI-adjusted increase in rents may be 3%, but principal funds from a sale could be invested in a Certificate of Deposit at a rate of 4% or higher. However, there is a major difference in the analysis because the leasing model includes the return of the land at the end of the lease period, at the then current market value, to the allotment holder. That adds the full value of market appreciation into the net present value of the leasing cash flows. That adds another 6% to 7% of annual returns to the leasing model.

The recommendations made in the accompanying document address the issues described above, but some of them will depend on policy decisions. A final Master Lease model can be developed to incorporate those policy decisions.

PINE NUT ALLOTMENTS LEASE RECOMMENDATIONS

Introduction

This document was prepared by Elesco Limited for the U.S. Bureau of Indian Affairs, Western Regional Office, to assess pertinent issues and provide recommendations for new master land leases for the Pine Nut Allotments in Western Nevada. **This document was not prepared by a licensed attorney and the development of any lease contracts will require the services of qualified legal counsel.** Instead, this document was prepared by individuals who have been licensed to provide real estate services in Arizona and California and who have had extensive experience in negotiating land leases in those states.

This document represents findings from a combination of sources that were studied in the research for this project and which are listed in the Appendix. These include the US Code – Title 25 – Indians, as well as several examples of leases entered into by the BIA or individual Indians and/or Tribes; court cases involving disputes arising from some of those leases; municipal land leases; and best practices for private-sector commercial land leases.

Two key assumptions underlie these findings: (1) the Pine Nut Allotments will remain in Trust status, and there will be no provisions for granting fee title to the land to any parties; and (2) the leases are expected to return fair market value to the allotment owners over the periods of those leases.

Important issues are identified for each of the lease provisions, with discussion of their potential implications and recommendations for their resolution.

Perspectives on Land Leases

A land lease is a contractual financial arrangement by which the ground on which a proposed structure is to be built is leased to a builder/developer (Lessee) instead of being sold, meaning that the land and the structure(s) are owned independently. Instead of acquiring title in fee ownership, the builder/developer acquires certain leasehold rights in the property. The most common reason for a land lease contract is that the property owner (Lessor) wants to retain ownership of the land but not take on the responsibilities for its development. That right is contractually assigned to the builder/developer in exchange for lease payments that provide an income stream to the owner.

Generally, the contract for a land lease runs for at least 50 years although leases up to 99 years are also common. The Lessor may renew a lease as it approaches termination, usually at renegotiated amounts of rent; however, that is not automatic and therein lies one of the greatest difficulties in leasing land on which other parties are expected to make capital improvements. If the lease is not renewed, the standard practice is that any improvements made on the land revert

to ownership by the Lessor. Other arrangements may include removal of those improvements by the Lessee, or a fixed-sum payment from the Lessor to the Lessee in lieu of removal.

For commercial developments, this provision affects the quality of the investment in terms of the Lessee's ability to finance, refinance, or sell the capital improvements. The primary recourse of a lender if the Lessee defaults is to take back ownership of the property and find some other party to cover the debt service obligations. The closer the default is to the end of the lease period, the more difficult it becomes to find a third party willing to assume that debt or to collateralize new financing. Anyone considering buying the property will likely expect a deeply discounted price to reflect the shortened period for recovering the purchase price.

Despite this concern, commercial projects are the most likely uses for land that is leased because of two factors: (1) the income stream that can be produced by renting facilities or space to subtenants; and (2) the tax advantages that can be gained from depreciating income properties as well as deducting the interest payments. The investment in the project will be analyzed for its after-tax rate of return on equity capital and the decision to go forward will be based on the outcome of that analysis.

It is a different story for residential properties, especially those that are owner-occupied such as primary or second-home developments. In addition to the psychological aversion to giving up their homes at the end of the lease period, owner-occupants do not have the advantage of depreciating their investment although they can still deduct mortgage interest. They will not have income streams from their homes unless they rent them as income properties. Instead, they are more likely to consider their principal payments as wealth-building investments and value appreciation because an internal rate of return (IRR) analysis is not applicable. If the residence reverts to the landowner at the end of the lease term, then both the accrued principal payments and the appreciation also revert to the land owner. These concerns make it an advantage to offer a longer-term lease for development of residential properties than for commercial properties.

From the Lessor's perspective, two of the main concerns are (1) obtaining specific performance from the builder/developer, i.e., ensuring that the Lessee will construct, maintain and manage the improvements according to the terms specified in the lease; and (2) ensuring that the Lessor retains or recaptures the value of the land in the event the Lessee defaults on the terms of the lease. Many of the provisions in the lease are intended to protect the Lessor's interests in these two very important areas.

There is no single format for writing land leases as each one has to be tailored to the specific property being leased, the uses that are proposed on it, and the unique interests of the parties entering into the lease. The Master Lease written for the Pine View Estates contained 47 provisions with their individual sub-paragraphs. The Lease Provision Checklist provided by the American Society of Real Estate Counselors (ASREC) contains 33 sub-paragraphs under four primary headings: (1) Fundamental; (2) Desirable; (3) Options; (4) Special and Miscellaneous. These apply more broadly than just to a land lease but include provisions for leasing structures as well as land. The list below is a modified version showing only those provisions that would normally apply to land leases.

Land Lease Provisions Checklist (American Society of Real Estate Counselors)

- | | |
|---|---|
| <p>A. Fundamental</p> <ol style="list-style-type: none">1. Name and legal address of parties2. Description of property3. Term of agreement4. Rental and method of payment <p>B. Desirable</p> <ol style="list-style-type: none">1. Use – limitations & restrictions2. Utilities3. Damages4. Indemnification5. Inspection6. Notices7. Assignment and/or subletting8. Ad valorem taxes9. Remedies for Default10. Remedies in Bankruptcy | <p>C. Options</p> <ol style="list-style-type: none">1. Renewal2. Cancellation <p>D. Special & Miscellaneous</p> <ol style="list-style-type: none">1. Inducements2. Postponement and/or holdover3. Subordination4. Security5. Escalator clauses<ol style="list-style-type: none">a. Rentsa. Taxesb. Insurance6. Percentage rents7. Arbitration8. Applicable laws |
|---|---|

Discussion of Lease Provisions for the Pine Nut Allotments

The discussion below follows the format of the Pine View Estates master lease between the allotment owner (Lessor) and PTP, Inc. (Lessee), with references as appropriate to the above checklist and to other documents that were examined for this report. Its purpose is to highlight major issues that will need to be considered in the lease agreement form that is drafted by legal counsel.

Name and Legal Address of Parties

This appears to be straight-forward but may be more complicated. Many of the Pine Nut Allotments are held in multiple ownerships, due in part to deaths and inheritances, marriages, and distribution through extended families. Some of these allotments show more than 50 owners! For those allotments not held in single ownerships, there needs to be an express provision designating who can sign the lease on behalf of the other owners. It may be desirable to have the multiple owners form an L.L.C. or other legal entity to perform this function, or have the owners agree to a limited Power of Attorney assigning the responsibility to one individual. In any case, many real estate transactions have come apart because it was later determined that the person who signed the lease or sale agreement did not have the legal authority to do so.

1. Definitions

This section of the Pine View Estate master lease contains provisions that are unique to the legal requirements of leasing land held in Trust and managed through the Secretary of the U.S. Department of the Interior. There do not appear to be any issues needing resolution.

2. Leased Premises (Description of Property)

This can be any legal method for accurately describing the land (property) being leased, including Assessor's maps and parcel numbers, tax lot numbers, surveyed allotment numbers, or metes and bounds descriptions. Any exclusion of portions of the property from the lease needs to be stated in this paragraph. Also, any structures, such as wells, need to be specifically referenced as part of the lease to avoid disputes over whether they are included.

3. Term (of Agreement)

The Pine View Estates master lease provided for a fifty-year (50) lease beginning on the Approval Date, but allowed for automatic extension for another forty-nine (49) years from the end of that period. That was subsequently amended to state that the automatic extension would occur with approval by the Superintendent. It is strongly recommended that the BIA obtain approval to grant 99-year leases to make the properties more marketable, especially for residential uses. Another common form of stating the term is to use specific starting and ending dates. Because the Approval Date may not be known when the lease documents are written and signed, those specific dates might be added by notation after the lease is approved.

4. Condition of Leased Premises

This provision calls for a satisfactory Due Diligence investigation by the Lessee, through an independent investigation, and declaration that the subject premises are satisfactory. It would be desirable to have a declaratory form, signed by both parties and attached to the lease, describing any discrepancies or non-standard conditions found on the property during the Due Diligence that are accepted by both the Lessor and the Lessee. This would be similar to the common practice among car rental agencies to note any damages, no matter how minor, before the renter takes possession to avoid future disputes. Disclaimers can also be made in this section, such as the disclaimer that the Lessor does not guarantee the availability of long term water supplies on the property.

5. Appraisal

In the Pine View Estates Master Lease, the Lessee is required to "provide an appraisal of the subject property at his sole expense satisfactory to the Secretary". This could be useful to the Lessee if a Deed of Trust is to be created on the leasehold interest, but otherwise it is not certain why this is made a requirement of the Lessee. In any dispute over loss of value due to carelessness or other actions by the Lessee, it would be to the Lessor's advantage to have an independent appraised value to use in setting damages.

6. *Miscellaneous Terms*

With one exception, this paragraph is used in the Pine View Estates Master Lease to address provisions of the Lessor's rights and obligations regarding participation in a Homeowner's Association and being able to hook up to the utility systems developed by the Lessee. The one exception is subparagraph #1 whereby the Lessor states that he is the sole owner of the allotment. As discussed above, this would be established more appropriately in the opening paragraph (Name and Legal Address of Parties) where it can be stated whether the Lessor is a sole owner, a legal representative of a group of owners, an officer who can legally bind an L.L.C., etc. The other provisions of this paragraph should be stated under a defined heading such as "Right to Access Infrastructure Improvements" rather than classified as "Miscellaneous".

7. *Purpose*

Paragraph 7 is a general statement of the proposed use(s) of the property similar to stating the uses allowed under a zoning ordinance. It does not establish specific development guidelines or restrictions: Those are cited in Paragraph 10 – General Plan, and Paragraph 12 – Plans and Designs, with the stipulation that they must be developed within a specified time frame.

Leases often allow for flexibility in the development of properties to adjust for changing markets and other circumstances that are unforeseen when the lease is negotiated. However, the Bureau should consider having a general plan for development provided by the Lessee *prior to* the execution of the lease. That can be accomplished with an option to lease that gives the Lessee the right to execute the lease when certain provisions have been satisfied, such as providing an acceptable development plan and showing financial capability to complete the development within a specified time frame. It is generally much simpler to work with an expired option than with a terminated lease.

Even for a single family residence, it would be desirable to have an approved site plan and building plan showing elevations with square footage, materials, landscaping, or other provisions normally included in CC&Rs (Covenants, Conditions and Restrictions). Paragraph 42 stipulates that CC&Rs will be developed only for subleases but these need to apply to primary leases as well. These do not necessarily have to be drawn by designers or engineers, but should give some idea of what the finished product will look like on the property.

One of the ways to deal with the uncertainties of these three paragraphs in the lease document would be to create standardized requirements for how properties need to be developed, similar to a zoning ordinance, along with a set of design standards such as are being developed for this project. Those can then be referenced in the lease as required performance standards. A development checklist could be provided to the Lessee to make sure the Lessee is fully informed about what is expected.

The BIA could consider adopting the Douglas County planning and building codes as regulatory guidelines for all development on the allotments. This idea was discussed with County planners during the investigations for this project and it was well received. It might also be possible for the BIA to contract with the County for building inspections and code enforcement. While they

would not have regulatory jurisdiction, they could advise the Bureau on whether the standards are being met and any deficiencies that need to be corrected. That still leaves the issue of enforcement, i.e., who enforces the codes to ensure compliance. Presumably, the County would not be able to issue a stop work order or withhold a certificate of occupancy. However, it could be written into the leases that non-compliance carries legal remedies to protect the Lessor, including termination of the lease of the work being performed is non-standard.

Without such standards, any verbal understandings between the Lessor and the Lessee will be subject to interpretation and potential disputes. It would be highly desirable to show and/or describe the proposed development plan as an attachment to the lease that has been approved by both parties, either under an option to lease or simply as a pre-lease requirement.

8. *Unlawful Uses*

This is a good provision, although there may be various interpretations as to what is “unlawful”. Presumably the term applies to the laws of the United States and the State of Nevada, but it may be desirable to state whether the International Building Code or any local ordinances that should be adopted apply (or are excluded) and/or whether the paragraph applies to administrative rules.

9. *Lease Fees*

This is a straight-forward description of the amounts payable, and their timing, under the terms of the lease. It is a little unusual because the payments are made to the Secretary for the benefit of the allotment holder. The various subparagraphs adequately cover the details of the lease. These specific provisions need to be written by legal counsel qualified to address the required regulatory language as well as general purposes of each individual lease. As noted above, there needs to be clear language about the method for calculating lease escalations, when they take effect, and how they are applied.

10. *General Plan*

Again, the way this paragraph is written it describes the general use (purpose) of the proposed development of the property and includes some specific requirements that are typical of a zoning ordinance. At this point, it does not say that the general plan has to be approved by the Secretary, the BIA office, or the Lessor. It would be desirable to be more specific and even show an approved concept plan as an attachment.

11. *Time and Expenditure for Improvements*

This is one of the most important paragraphs in the lease, especially the specified time period for improvements, because it is frequently the most common cause of disputes and/or defaults. The way it is written in the Pine View Estates master lease, there are several timed benchmarks that must be met to ensure continuing progress toward the final full development. This type of language needs to be included in all the leases.

Equally important is language that clearly describes the rights of the Lessor in case the Lessee fails to meet the requirements of the lease. There is a default provision in Paragraph 13 – Completion of Development, with a fuller provision in Paragraph 27 – Defaults. These could be combined into a single paragraph under the ASREC heading of “Remedies for Default”. That would allow description of each potential default and the specific actions that may be taken by the Lessee to cure the default, or by the Secretary or Lessor to claim a remedy.

In general, the primary objective of the default provision should be to ensure specific performance, i.e., that the Lessor actually develops the property in the manner described by the general plan as well as the specific plans and designs. The Lessor usually does not want to cancel a lease with only partially built improvements. For that reason, the Lessee needs to have room to adjust to changing market or financial conditions or other unforeseeable events.

12. Plans and Designs

Again, it is recommended that these be approved prior to the execution of the lease, even if it requires a pre-lease option agreement. This also commits the Lessee to making at least some financial investment in the project before taking a position in the property in addition to the required environmental assessment.

13. Completion of Development

As noted, this paragraph reinforces the timing of the project that has already been stipulated in the lease, along with a provision allowing the Lessor to terminate the lease if completion does not occur during the stipulated period. This paragraph would have more force if it were made part of the “Remedies for Default”.

14. Construction, Maintenance, Repair, Alterations

This paragraph is generally satisfactory but would have more strength if it referenced performance standards, CC&Rs, or other written requirements for construction and development. Any exceptions could be noted if agreed to by both parties.

The “indemnify and hold harmless” provision is acceptable in this paragraph but reference could also be made to Paragraph 24 – Public Liability Insurance.

15. Community Services

This is a good paragraph for emphasizing that the Lessor has no responsibilities or liabilities for maintaining and/or protecting the Lessee’s property. It would be useful to verify that these services can be obtained and to include the names of the public agencies that are responsible for police and fire protection.

16. Water Use and Facilities

This paragraph is vague because it does not define “large volumes” of water. It appears to be written for Pine View Estates under the assumption that all water will be provided by a domestic

water system. Many of the allotments will probably be served by wells, and perhaps by already existing wells owned by the Lessor. Water is an important issue in the Pine Nut Mountains and there needs to be flexible but clear language that describes how water will be provided to each allotment, who is responsible for providing it, what uses are allowed for that water (domestic, agricultural, recreational, commercial, etc.), what limitations are imposed, and how the water use will be monitored. There also needs to be language that states any remedies for violating the terms of this water agreement. The lease should include a disclaimer that ground water may not be available over the life of the development, and that this provision should be incorporated into all subleases in the Pine Nut allotments.

17. Non-Responsibility Notices

This paragraph is appropriate as written.

18. Sublease, Assignment, Transfer

This paragraph generally conforms to standard subleasing agreements in the private sector. It is important to note that a sublease does not relieve the Lessee of any obligations under the master lease, including the obligations to pay the primary lease rent to the Secretary and to maintain the property in good condition, whether occupied by the sublease tenant or vacated. Problems usually arise when the Lessee, who is the owner of the sublet building, tries to transfer primary lease responsibilities to the sublease tenant.

As written in this paragraph, the references to “assignment” and “transfer” apply to a specific two acres of commercial property. In practice, these terms also need to apply to the master lease itself. Presumably, the credit worthiness and ability of the Lessee to perform were validated prior to agreement to lease the property to the Lessee. There should not be an unrestricted right of the Lessee to assign or transfer the lease unless the Lessor agrees to the substitution. Otherwise, the Lessor might end up having a leaseholder with lower qualifications than the original Lessee.

19. Status of Sublease

This paragraph essentially moves the Lessor into the position of the Lessee as regards subleases if the master lease is terminated. There needs to be a set of mechanics for collecting rents, enforcing maintenance and upkeep agreements, payments of utilities, etc. to avoid having disputes with the sublease tenants about their responsibilities versus those of the Lessor.

20. Right of First Refusal

This paragraph is well written but has an unstated assumption that the Lessee will offer to “sell, exchange, or otherwise dispose of” improvements at a discounted market rate as the master lease moves toward termination. It would not be reasonable for the Lessor to acquire the property under a right of first refusal at the same value as if it were on land owned by the Lessee.

21. *Release Clauses*

This paragraph applies principally to development of a subdivision where the project is developed sequentially, over time, as individual lots are sublet. It is written to accommodate that purpose, but it is unclear whether this provision will need to be included in all leases.

22. *Encumbrances*

It might be worth stating that any encumbrance allowed under this paragraph shall be limited to the right of the encumbrancer (financing entity) to acquire the leasehold interest of the Lessee in default. That limits it to a right of possession, sale of improvements, or subleasing.

23. *Liens, Taxes, Assessment, Utility Charges*

The provisions of this paragraph are straightforward. Presumably, liens can only be made against the improvements placed on the land and not on the land itself. It might be worthwhile to state that explicitly.

24. *Public Liability Insurance*

This paragraph includes two parts: (1) a provision to name the Lessor as co-insured on the Lessee's general liability insurance policy, at specified amounts of coverage; and (2) a hold-harmless provision for the U.S. Government and its officers, agents and employees. It would be desirable to include the Lessor and the U.S. government under both of these provisions, which is standard practice in many general business contracts. There should also be a provision for notices upon each renewal to confirm that the policy still includes that coverage.

25. *Fire and Damage Insurance*

This paragraph requires the Lessee to "rebuild, repair or otherwise reinstate" damaged improvements. It would be worthwhile to add a provision that if circumstances prevent any of those from occurring, then the Lessee will be required to return the land to its original state prior to the construction of the improvements.

26. *Time of Essence*

This is a standard provision, usually coming at the end of the lease form.

27. *Default*

As noted earlier, this is one of the most important provisions in the lease document. A primary objective should be to require specific performance, which may be tacitly implied in the language that the Lessor and/or Secretary may "enforce by suit or other legal proceedings Lessee's compliance with any other provisions of this lease". Other ways of accomplishing this objective include incentives for completing the development on or ahead of schedule;

disincentives (usually monetary) for delaying completion past the due date; or the right of the Lessor to substitute its own contractor to complete a project if the Lessee does not perform according to the contract.

In any case, specific types of defaults and their specific remedies need to be listed. A minor default should not cause the whole project to come apart, but ongoing minor defaults could spiral out of control.

28. *Attorney's Fees*

The only recommendation here is that the applicable courts and/or jurisdictions for hearing lawsuits should be explicitly stated. Any legal remedies must be claimed in Federal court.

29. *Holding Over*

Good – No changes recommended.

30. *No Partnership*

Good – No changes recommended.

31. *Termination of Federal Trust*

This appears to be unique language for a lease of Federal Trust land so no changes are recommended.

32. *Tax Immunity*

Good – No changes recommended

33. *Signs and Advertisements*

This is vague in the reference to displays that are “not offensive or in bad taste”. This would be a normal practice for commercial developments but it is not certain how it would apply to residential development. This is another case where the advice of legal counsel should be sought for the specific language which should be included in the design standards.

34. *Obligations of Lessee*

Again, this is language that applies only to leases of Trust land so no changes are recommended.

35. *Memorandum of Lease*

This Memorandum should include all of the four fundamentals of the ASREC lease provisions:

1. Name and legal address of parties
2. Description of property
3. Term of agreement
4. Rental and method of payment

36. *Agreements for Utility Lines and Streets*

An additional subparagraph needs to be added that states: “Lessee shall be solely responsible for paying the costs of all line extension and hookup fees for said utilities”.

37. *Antiquities*

Again, this provision applies to all leased Trust land.

38. *Minerals*

It might be advisable to include Timber in this provision to ensure that an allotment does not get clear cut by the Lessee.

39. *Payments and Notices*

This is straightforward.

40. *Inspection*

It would be desirable to include a “reasonable notice” provision for residential developments to avoid conflicts with the next paragraph.

41. *Quiet Enjoyment*

This is a standard term, especially for residential leases.

42. *Adoption of Covenants, Conditions and Restrictions*

As noted earlier, it would be desirable to have CC&Rs apply to the entire master lease and not just to subleases. These are separate documents, usually recorded, that can be referenced throughout the lease for provisions of specific performance.

43. *Option to Purchase*

While a major part of the Pine View Estates Master Lease, this paragraph is assumed to be inapplicable to future leases of allotments in the Pine Nut Mountains.

44. *Delivery of Premises*

This is straightforward and no changes are recommended.

45. *Lease Binding*

This is a good statement as far as it goes, but there may need to be additional language to ensure that the lease continues to be in force if the Lessor or an individual representing a multi-party Lessor agency dies or is incapacitated. As it reads, the lease is binding upon the “parties hereto and their successors, heirs and assigns *upon approval of said parties* and the Secretary”. The lease should not be cancelled because some parties do not approve to accept the responsibility for enforcing it.

46. *Interest of Members of Congress*

Another interesting paragraph that is applicable only to leases of Trust lands.

47. *Resolution of Disputes*

This is straightforward.

Other Considerations

It is not certain that several disputes (and some civil and criminal suits) arising from certain leases of Trust lands could have been averted simply by tightening up the language of the leases. For example, the Fort Mojave Indian Tribe signed a Master Lease for development of housing on 528 acres of Trust land near Laughlin, Nevada, in 1993. Two rounds of municipal bond financing were arranged to provide funding for the project, the first in 1996 and the second in 1999. The bonds were secured by Deeds of Trust on the leasehold interest of the offeror. However, no Deeds of Trust were ever recorded which caused a complaint to be filed by the Security and Exchange Commission against the developer, who defaulted on the bonds and interest payments.

This was a case of a Tribe entering into a master lease in good faith with a developer who was apparently inexperienced in financing projects on leased Trust lands. The Tribe was caught in the middle of a financing scheme that would not have been recognized through any provisions of their long-term lease of the land.

Another case arose from the Lone Butte Industrial Park developed by the Gila River Indian Community in Arizona. This case involved a lease to a major private corporation that subsequently sold a security interest in its manufacturing equipment to another party, then sold its entire business to yet a third party. The third party failed to perform its obligations under the terms of the original lease, so Lone Butte decided to foreclose on the plant and equipment. The ownership of the equipment came into dispute and the matter went to court. Much of the argument thereafter revolved around jurisdictional issues.

This shows the importance of removing the vague language of the Pine View Estates Master Lease and replacing it with specific provisions for performance and remedies for defaults. It also demonstrates the importance of obtaining the Lessor's approval for any changes in a lease through subletting, assignments, transfers of property, or other actions. Further, it shows the importance of the Lessor performing due diligence into the qualifications, experience, track record, and financial capabilities of the Lessee before the lease agreement is signed.

APPENDIX I DEVELOPMENT PROCESS CHECKLIST

PRE-DEVELOPMENT PROCESS CHECKLIST

This checklist is for use by applicants to prepare information required for BIA to execute a lease.

Access

- ☐ The Applicant must show that they have are can obtain legal access, in perpetuity, to a public road from the allotment
- ☐ Rights-of-Way documents (either easement(s) or fee ownership) for access must by filed with the BIA Realty Office

Water Supply & Water Quality

- ☐ Test results showing adequate groundwater to serve the proposed development and to maintain fire flows
- ☐ Test results showing groundwater quality meets EPA and state standards for potable water
- ☐ Type of treatment, if required to meet EPA and state standards

Surveys

- ☐ Boundary survey of allotment (filed with the BIA Land Titles and Records Office)
- ☐ Topographic data
- ☐ Preliminary plat delineating the area to be leased, including lots and street rights-of-way for housing subdivision

Preliminary Site Plans

All preliminary site plans require the following items:

- ☐ A minimum of five (5) complete sets with each of the following labeled plans are required: Existing Conditions Site Plan; Preliminary Development Site Plan
 - ☐ At least two (2) copies of each complete plan set must be drawn to an accurate scale (no greater than 1 inch = 100 feet)
 - ☐ At least one (1) copy of each complete plan set must be legibly reduced to no greater than 8.5 x 11 inches, and be suitable for photocopy reproduction

- ☐ Illustrate the site in its entirety (additional plans may be submitted that show a portion of the site)

Existing Conditions Site Plan

- ☐ Information from **All Site Plans** section above
- ☐ Location of existing structures and fences
- ☐ Location of any existing utility lines, underground tanks, drainfields, roads, and easement
- ☐ Existing contour lines at 2-foot vertical intervals in areas of slopes <10% and 5-foot intervals for slopes of >10%
- ☐ 100-year floodplain and floodway boundaries, if applicable
- ☐ Delineation of areas prone to flash flooding, if applicable
- ☐ Identification of critical areas, including seeps, springs, wetlands, and areas subject to seasonal inundation, if applicable
- ☐ Drainage patterns shown by arrows indicating direction of flow
- ☐ Location of trees of >6-inch in diameter at breast height

Preliminary Development Site Plan

- ☐ Information from **All Site Plans** section above
- ☐ Location of all proposed development (including but not limited to roads and streets, buildings, pathways, driveways, decks, retaining walls, and any other structures)
- ☐ Rights-of-way, lot lines (including lot size), and easements
- ☐ Location of proposed utility lines and connections, wells and water storage facilities, stormwater systems (water quality, detention and discharge), and septic or sewerage facilities
- ☐ Proposed final contour lines at 2-foot vertical intervals in areas of slopes <10% and 5-foot intervals for slopes of >10%
- ☐ Delineation of limits of temporary and permanent disturbance areas
- ☐ Location of existing trees over 6 inches in diameter that will remain
- ☐ Delineation of the 100-foot buffer area along the boundary of the allotment

Evidence of Ability to Provide Public Services & Utilities

- ☐ Power
- ☐ Communications

- ☐ Solid Waste Collection & Disposal
- ☐ Emergency Services
 - ☐ Police
 - ☐ Fire
 - ☐ Emergency Medical Response
- ☐ Education District(s)
- ☐ Other Special Districts as appropriate

Environmental Documentation

- ☐ Environmental Assessment (EA) for Type I Permit, including a Cultural Resource Survey (No Public Hearing required)
- ☐ Environmental Impact Statement (EIS) for Type II Permit, including a Cultural Resource Survey (Public Hearing required)
- ☐ **Real Estate Appraisal** (Must be conducted by a member of the Appraisal Institute, agreeable to both parties, or a individual prequalified by the BIA)

Engineer's Report

Two (2) copies of a narrative report prepared by a licensed engineer in the state of Nevada addressing each of the following:

- ☐ Description of the project site
- ☐ Proposed system for water supply, treatment (if necessary), storage, and distribution
- ☐ Proposed system for sewage collection, treatment, and disposal
- ☐ Results of perk tests if subsurface sewage disposal is proposed
- ☐ Proposed stormwater management
- ☐ Proposed roads and streets
- ☐ Provision of power and communications
- ☐ Preliminary Engineer's Cost Estimate

Traffic Impact Study

- ☐ Traffic study to determine the impacts of additional traffic generated by the proposed development on roads, highways, and intersections in and around the project area
- ☐ Proposed mitigation, if required, that meets local jurisdictional and/or state requirements

Final Development Plans

All Final Site Plans require the following items:

- ☐ A minimum of five (5) complete sets with each of the following labeled plans are required: Existing Conditions Site Plan; Final Development Site Plan; Mitigation/Remediation Site Plan; Construction Management Site Plan
 - ☐ At least two (2) copies of each complete plan set must be drawn to an accurate scale (no greater than 1 inch = 100 feet)
 - ☐ At least one (1) copy of each complete plan set must be legibly reduced to no greater than 8.5 x 11 inches, and be suitable for photocopy reproduction
- ☐ Illustrate the site in its entirety (additional plans may be submitted that show a portion of the site)

Existing Conditions Site Plan

- ☐ Information from **All Final Plans** section above
- ☐ Location of existing structures and fences
- ☐ Location of any existing utility lines, underground tanks, drainfields, roads, and easement
- ☐ Existing contour lines at 2-foot vertical intervals in areas of slopes <10% and 5-foot intervals for slopes of >10%
- ☐ 100-year floodplain and floodway boundaries if applicable
- ☐ Drainage patterns shown by arrows indicating direction of flow
- ☐ Location of trees of >6-inch in diameter at breast height

Final Development Site Plan

- ☐ Information from **All Final Plans** section above
- ☐ Location of all proposed development (including but not limited to roads and streets, buildings, pathways, driveways, decks, retaining walls, and any other structures)
- ☐ Rights-of-ways, lot lines (including lot size), and easements

- ☐ Location of proposed utility lines and connections, wells and water storage facilities, stormwater systems (water quality, detention and discharge), and septic or sewerage facilities
- ☐ Proposed final contour lines at 2-foot vertical intervals in areas of slopes <10% and 5-foot intervals for slopes of >10%
- ☐ Delineation of limits of temporary and permanent disturbance areas
- ☐ Location of existing trees over 6 inches in diameter that will remain

Mitigation/Remediation Site Plan

- ☐ Information from ***All Final Plans*** section above
- ☐ Location and type of trees and other landscaping to be planted, including areas to be re-seeded with native grasses (identify seed mixture)
- ☐ Location and size of stormwater management facilities

Construction Management Site Plan

- ☐ Information from ***All Final Plans*** section above
- ☐ Location of construction ingress and egress
- ☐ Location of equipment staging and stockpile areas
- ☐ Location and type of erosion control measures to be installed
- ☐ Identification of devices to be used to protect trees
- ☐ Location of temporary construction fencing

☐ **Final EA or EIS**

☐ **Final Engineer's Report**

☐ **Final Plat** (to be filed with the BIA Land Titles and Records Office)

Assurance of Project Financing

- ☐ Record of past performance and documentation of adequate financial stability
- ☐ Proof of financial commitment for project funding from a reputable source(s)

DEVELOPMENT PROCESS CHECKLIST

This checklist is for use by Master Lease Holder and Contractor to meet requirements of BIA subsequent to issuing a Master Lease.

Plans, Specifications, and Architect's Engineer's Cost Estimate

- ☐ Master Lease Holder (developer) will submit construction plans, specifications and A/E cost estimate to BIA Western Regional Office (Plans must be stamped by a licensed Architect and/or Engineer licensed in the state of Nevada and be in conformance with the Final Development Plan, the Pine Nut Development Standards, applicable federal regulations, the International Building Code, and any other codes or regulations deemed appropriate by the BIA)
- ☐ Master Lease Holder (developer) will submit wastewater treatment and disposal plans and specifications to EPA for review and approval
- ☐ **Access Permit (road, street, or highway) from Appropriate Jurisdiction**

Bonding

- ☐ Master Lease Holder will post a performance bond (or adequate insurance coverage) in the amount of the construction price plus 10% with the BIA
- ☐ Contractor will furnish to BIA and maintain in effect at all times during the contract period a performance bond in the sum equal to the construction price
- ☐ Contractor will furnish to BIA a payment bond in the sum of the construction price

Insurance

Contractor will be required to carry the following insurance and provide evidence of such insurance coverage to the BIA and the Master Lease Holder:

- ☐ Workers' compensation Insurance
- ☐ Builder's risk Insurance
- ☐ General Liability Insurance
- ☐ Automobile Liability Insurance

- ☐ Any additional insurance as appropriate (hazardous materials insurance, pollution liability insurance, etc.)

Reimbursements for Public Services

- ☐ The Master Lease Holder will provide the BIA with documentation proving that all one-time fees have been paid; and/or that (see the following)
- ☐ The first installment of any ongoing fees has been made

Construction and Ongoing Inspection

- ☐ Contractor will submit inspection reports in a timely manner at critical points during construction for development requiring only periodic construction inspection
- ☐ Contractor will submit daily inspection reports for developments requiring full-time, on-site construction inspection by a certified and independent third party

☐ **Final Inspection**

Post Compliance Checklist

- ☐ Set of As-built Drawings on Mylar
- ☐ Certification by the Architect and/or Engineer that the project was built in conformance with the plans and specifications
- ☐ Set of all Construction Drawings on mylar

Homeowners' Association

- ☐ Master Lease Holder will file for and establish a Homeowner's Association (in accordance with state of Nevada statutes) for all residential developments involving home ownership
- ☐ A copy of the association's charter and bylaws will be provided to the BIA
- ☐ **Warranties** (to be provided by the contractor: 1 year for residential construction and 2 years for commercial construction)
- ☐ **Notice of Compliance with Homebuyer Protection** (to be provided by the contractor to the first homeowner for each residence)

POST-DEVELOPMENT PROCESS CHECKLIST

This checklist is for use by Master Lease Holder to meet requirements of BIA subsequent to completion of construction.

Sub-Lease Conformance

- ☐ Any sub-lease entered into by the Master Lease Holder will include all provisions and disclosures required by BIA in its model Sub-Lease Agreement.
- ☐ The Master Lease Holder will provide the BIA with copies of all sub-leases

Conformance with Conditions and Maintenance Requirements

- ☐ Conform to conditions of lease and appropriately maintain property and buildings to protect value of the land for allotment owner(s)
- ☐ Provide BIA with a Corrective Action Plan to resolve any problems identified by BIA

Monitoring and Enforcement of Water and Sewerage Facilities

- ☐ Annual Water Quality Tests – Water quality test results will be submitted to the BIA. If standards are exceeded the Master lease holder will submit a Corrective Action Plan to the BIA.
- ☐ Water Supply Monitoring – Master Lease Holder will test wells for yield and for static level every 3 years and submit results to BIA. A Corrective Action Plan will be required if yields are not adequate to meet demand or if the static level falls.
- ☐ Monitoring and reporting for Community Sewage Treatment and Disposal Facilities will be in conformance with EPA requirements. Test results will be provided to the BIA. If EPA standards are not met, the Master Lease Holder will submit a Corrective Action Plan to the EPA and BIA for approval.

Warranty Inspections

- ☐ Annual warranty inspection will be conducted for the warranty period to document any materials defects and problems resulting from faulty workmanship
- ☐ Contractor will be responsible for corrective actions